

IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF PENNSYLVANIA

AMBRIDGE AREA SCHOOL DISTRICT,)	
WESTERN BEAVER COUNTY SCHOOL)	Civil Case No. 2:23-cv-01530-CB
DISTRICT, BLACKHAWK SCHOOL)	
DISTRICT, UNION AREA SCHOOL)	Class Action
DISTRICT, SOUTH SIDE AREA SCHOOL)	
DISTRICT, BEAVER AREA SCHOOL)	Hon. Cathy Bissoon
DISTRICT, local government entities, and on)	
behalf of similarly situated school districts;)	
A.W., M.W., L.W., and H.F., minors)	
by and through their parent/legal guardian)	
VERA FINNEY; and J.D., a minor by and)	
through his parent/legal guardian)	
ROBERT D. DOUGHTY, individually and)	
on behalf of similarly situated individuals,)	
)	
Plaintiffs,)	
)	
v.)	
)	
NORFOLK SOUTHERN CORPORATION,)	
NORFOLK SOUTHERN RAILWAY)	
COMPANY, OXY VINYLs LP, GATX)	
CORPORATION, GENERAL AMERICAN)	
MARKS COMPANY, TRINITY)	
INDUSTRIES LEASING COMPANY,)	
)	
Defendants.)	

FIRST AMENDED COMPLAINT

NOW COME Plaintiffs, Ambridge Area School District, Western Beaver County School District, Blackhawk School District, Union Area School District, South Side Area School District, and Beaver Area School District, (collectively “Representative School District Plaintiffs”) individually and on behalf of similarly situated school districts (“School District Class Members”), and minor Plaintiffs A.W., M.W., L.W., and H.F., by and through their parent/legal guardian Vera Finney, and J.D. by and through his parent/legal guardian Robert D. Doughty, (collectively

Representative Student Plaintiffs”) individually and on behalf of similarly situated individuals (“Student Class Members”), who hereby file this First Amended Complaint in the above captioned case as a matter of course pursuant to Fed. R. Civ. P. Rule 15(a)(1). Plaintiffs allege as follows:

INTRODUCTION

1. At approximately 9:00pm on February 3, 2023, eastbound Norfolk Southern Railway Train 32N, owned and/or operated by Defendant Norfolk Southern Corporation (“NSC”) and/or Defendant Norfolk Southern Railway Company (“NSRC”) (collectively the “Norfolk Defendants”) derailed in East Palestine, Ohio.

2. Train 32N was just under 2 miles long, weighed a massive (approximate) 18,000 tons, and was traveling at least 47-50 mph just before it derailed. It was manned by three people at the time: an engineer, conductor, and conductor trainee; and was comprised of 2 head-end locomotives and 149 railcars. This included 20 railcars that were carrying toxic, hazardous, and dangerous chemicals, of which 11 derailed. These 11 derailed tank cars that were carrying toxic, hazardous, and dangerous chemicals, including known human carcinogens, ignited when the derailment occurred and fueled a large fire that damaged an additional 12 non-derailed railcars. First responders fought the initial fire from the train derailment from February 3rd through February 6th.

3. On February 5th one of the railcars carrying a known human carcinogen, vinyl chloride, became even more dangerous when a safety valve failed and the fire caused the temperature and pressure to build in the railcar. On February 6th, the temperature and pressure within the railcar with the failed safety relief valve continued to increase, and the Norfolk Defendants implemented, and/or caused or contributed to the implementation of, and/or approved the implementation of, a plan whereby explosives would be used to blow holes in all five vinyl-chloride-carrying railcars in order to empty/vent the entire contents of all five railcars –

approximately 1,000,000 pounds of toxic vinyl chloride – onto/into the ground, and then the 1,000,000 pounds of toxic vinyl chloride would be permitted to burn on the spot until it (seemingly) disappeared.

4. At approximately 4:30pm on February 6th, the Norfolk Defendants, either directly or indirectly, caused or contributed to this plan occurring. This so called “controlled release” or “controlled burn” or “vent and burn” was anything but controlled. The explosion and subsequent inferno released a large plume of thick black toxic smoke and toxic fallout, including toxic soot and other toxic particulate matter.

5. Both the derailment and initial chemical release and initial fire, and then the intentional use of explosives to empty/vent the five vinyl chloride carrying railcars and the ensuing fire, caused the release of, contamination with, and exposure to, Vinyl Chloride, Dioxins, Phosgene, Hydrogen Chloride, Dipropylene Glycol, Diethylene Glycol, Ethylene Glycol Monbutyl Ether, Polyvinyl, Polypropyl Glycol, Isobutylene, Butyl Acrylates, Petro Oil, Benzene, and volatile and semi-volatile byproduct compounds and other combustible materials.

6. These chemicals were transported over and onto the school properties through plumes of toxic smoke and toxic fallout, including toxic soot and other toxic particulate matter containing these chemicals, and were deposited on the school properties (both real property and personal property) through the toxic fallout.

PARTIES

7. Representative Plaintiff, Ambridge Area School District, is a school district that, as of at least February 3, 2023, and continuing thereafter, owns and possesses buildings and facilities within a 30-mile radius of East Palestine, Ohio, including the following school buildings and facilities, located at the following addresses: Ambridge Area High School, 901 Duss Avenue,

Ambridge, Pennsylvania 15003, Ambridge Area Middle School, 401 First Street, Freedom, Pennsylvania 15042, Economy Elementary School, 1000 First Street, Freedom, Pennsylvania 15042, Highland Elementary School, 1101 Highland Avenue, Ambridge, Pennsylvania 15003, and State Street Elementary School, 600 Harmony Road, Baden, Pennsylvania 15005.

8. Ambridge Area School District encompasses a 27 square mile area, and includes students from Beaver County in Pennsylvania.

9. Representative Plaintiff, Western Beaver County School District, is a school district that, as of at least February 3, 2023, and continuing thereafter, owns and possesses buildings and facilities within a 30-mile radius of East Palestine, Ohio, including Fairview Elementary School, 343 Ridgemont Drive, Midland, Pennsylvania 15059; and Western Beaver Junior Senior High School, 216 Engle Road, Industry, Pennsylvania 15052.

10. Western Beaver County School District encompasses a 34.5 square mile area, and includes students from Beaver County in Pennsylvania.

11. Representative Plaintiff, Blackhawk School District, is a Pennsylvania local governmental entity that, as of at least February 3, 2023 and continuing thereafter, owns and possesses (without limitation) the following school buildings and facilities, located at the following addresses: 500 Blackhawk Road, Beaver Falls, Pennsylvania 15010; 402 Shenango Road, Beaver Falls, Pennsylvania 15010; 635 Shenango Road, Beaver Falls, Pennsylvania 15010; and 701 Darlington Road, Beaver Falls, Pennsylvania 15010. These buildings and facilities are all within a 30-mile radius of East Palestine, Ohio.

12. Blackhawk School District encompasses a 69 square mile area, and includes students from both Beaver and Lawrence Counties in Pennsylvania.

13. Representative Plaintiff, Union Area School District, is a Pennsylvania local governmental entity that, as of at least February 3, 2023 and continuing thereafter, owns and possesses buildings and facilities within a 30-mile radius of East Palestine, Ohio, including 2106 Camden Ave, New Castle, Pennsylvania 16101 and 500 South Scotland Lane New Castle, Pennsylvania 16101.

14. The Union Area School District encompasses approximately 10 square miles, and includes students from Lawrence County, Pennsylvania.

15. Representative Plaintiff, South Side Area School District, is a Pennsylvania local governmental entity that, as of at least February 3, 2023 and continuing thereafter, owns and possesses buildings and facilities within a 30-mile radius of East Palestine, Ohio, including 4949 State Route 151, Hookstown, Pennsylvania, 15050. These buildings and facilities are all within a 30-mile radius of East Palestine, Ohio.

16. The South Side Area School District encompasses approximately 76 square miles, and includes students from Beaver County, Pennsylvania.

17. Representative Plaintiff, Beaver Area School District, is a Pennsylvania local governmental entity that, as of at least February 3, 2023 and continuing thereafter, owns and possesses buildings and facilities within a 30-mile radius of East Palestine, Ohio, including 375 College Avenue Beaver, PA 15009; 1300 Fifth Street Beaver, PA 15009; Dutch Ridge Road Beaver, PA 15009; Gypsy Glen Road Beaver, PA 15009; Gypsy Glen Road Beaver, PA 15009.

18. Minor Plaintiffs A.W., M.W., L.W., and H.F., were students at Representative Plaintiff, Ambridge Area School District, at the time of the subject derailment. Vera Finney is their parent/legal guardian.

19. Minor Plaintiff, J.D., was a student at Representative Plaintiff, Beaver Area School District, at the time of the subject derailment. Robert D. Doughty is his parent/legal guardian.

20. Defendant Norfolk Southern Corporation (“NSC”) is a public corporation duly organized and existing under and by virtue of the laws of the Commonwealth of Virginia, with its principal place of business located at 1200 Peachtree Street, NE, Atlanta, Georgia 30308.

21. Defendant Norfolk Southern Railway Company (“NSRC”) is a wholly owned subsidiary of NSC. NSRC is a Class I railroad corporation duly organized and existing under and by virtue of the laws of the Commonwealth of Virginia, with its principal place of business located at 1200 Peachtree Street, NE, Atlanta, Georgia 30308.

22. Defendant Oxy Vinyls LP (“Oxy Vinyls”), is a North American manufacturer and shipper of vinyl chloride, resins, chlorine, and caustic soda. Oxy Vinyls also owns and maintains a fleet of railcars for use in transportation of their products. Oxy Vinyls is a Delaware limited partnership, with its principal place of business in Dallas, Texas. Occidental PVC, LLC, and Occidental Chemical Corporation are the only Partners of Oxy Vinyls. The sole member of Occidental PVC, LLC is Occidental Chemical Corporation. Occidental Chemical Corporation is a New York corporation with its principal place of business in Dallas, Texas.

23. Defendant GATX Corporation (“GATX”) is a public corporation that owns and maintains a fleet of railcars for use in transportation of goods and products and leases their railcars to shippers such as Oxy Vinyls in this case. GATX Corporation is a New York corporation, with its principal place of business in Chicago, Illinois.

24. Defendant General American Marks Company (“GAMC”) owns and maintains a fleet of railcars for use in transportation of goods and products and leases their railcars to shippers such

as Oxy Vinyls in this case. GAMC is a Delaware corporation with its principal place of business in Chicago, Illinois. GAMC is a wholly owned subsidiary of Defendant GATX.

25. Defendant Trinity Industries Leasing Company (“TILC”) owns and maintains a fleet of railcars for use in transportation of goods and products and leases their railcars to shippers such as Oxy Vinyls in this case. TILC is a Delaware corporation with its principal place of business located in Dallas, Texas and is a wholly owned subsidiary of Trinity Industries, Inc.

26. At all relevant times, Defendants acted on their own, as well as by and through their officers, directors, executives, employees, contractors, subcontractors, and/or agents.

JURISDICTION AND VENUE

27. Jurisdiction exists under the Class Action Fairness Act (“CAFA”), 28 USC §1332(d), because at least one class member is a citizen of a different state than Defendants, and the matter in controversy exceeds the sum or value of \$5,000,000.

28. This Court has personal jurisdiction over Defendants because they regularly engage in business within Pennsylvania, including operating and/or using the Fort Wayne rail line, which runs from Illinois to Pittsburg, Pennsylvania. Additionally, the tortious conduct and otherwise improper conduct of the Defendants caused damages to Plaintiffs and class members in Pennsylvania.

29. Venue is proper in this judicial district pursuant to 28 USC §1391(b)(2), as Defendants tortious and otherwise improper conduct caused damages to occur within the Western District of Pennsylvania.

FACTS

The Norfolk Defendants

30. NSC's 2021 Annual Report states that NSC's subsidiaries were under the common control of NSC, and that rail operations are coordinated at the holding company level by NSC's Chief Operating Officer. Thus, NSC controls NSRC and has established management, financial, operational safety standards, and parameters for NSC's operations which directly involve the subject train, railway, and safety devices. Thus, NSC and NSRC are jointly and severally liable for each other's conduct as alleged herein because they acted in concert and under alter ego and piercing the corporate veil theories.

31. The Norfolk Defendants operate approximately 19,300 route miles in 22 states and the District of Columbia, including more than 2,000 route miles in Pennsylvania and serves every major container port in the eastern United States.

32. According to the Federal Railroad Administration ("FRA"), the Norfolk Defendants had the most derailments of all railroad companies in Pennsylvania, with 76 accidents total from 2019 to 2022 – 23 in 2019, 14 in 2020, 23 in 2021, and 16 in 2022.

33. According to the FRA, the Norfolk Defendants also had the most derailments of all railroad companies in Ohio from 2019 through 2022, with 69 accidents total – 22 in 2019, 18 in 2020, 15 in 2021 and 14 in 2022.

34. According to the FRA, the Norfolk Defendants also had the most derailments of all railroad companies in West Virginia 2019 through 2022, with 13 accidents total – 4 in 2019, 6 in 2020, 2 in 2021, and 1 in 2022.

35. The Norfolk Defendants' recent history of train derailments and accidents has been caused, in part, by their adoption and implementation of a program known as "Precision Scheduled Railroading" ("PSR").

36. In 2019, the Norfolk Defendants implemented PSR to cut costs, increase profits, and decrease NSC's operating ratio to entice investment in NSC. Operating ratio is a metric that investors use to gauge the financial health of a company.

37. Upon information and belief, approximately eighty percent (80%) of the compensation for NSC's executives are based on performance metrics such as operating ratio and operating income for NSC subsidiaries, including NSRC. Operating ratio looks at operating expenses as a percentage of revenue – the lower the operating ratio the more attractive the company is to investors and may be thought of as a measure of "efficiency" as compared to peer companies. Operating income looks at operating revenue less operating expenses.

38. Since many, if not most, Class I railroad companies were implementing (or had already implemented) PSR programs, the Norfolk Defendants were essentially in a race to the bottom with their competitor railroad companies.

39. To win this race, cut costs, increase profits, and decrease NSC's operating ratio, the Norfolk Defendants, under their PSR program, ran heavier, longer trains than ever before, and at higher speeds than ever before, while simultaneously reducing their staff of employees – including those employees involved in safety, inspection, maintenance, training, operation, and lookout roles, which caused or contributed to the injuries complained of.

40. The Norfolk Defendant's decision to implement PSR also led, in part, to the Norfolk Defendants running their trains on fixed schedules, which reduced and limited the amount of time

for inspection, maintenance, and repair of trains and railcars, which caused or contributed to the injuries complained of.

41. The Norfolk Defendant's decision to implement PSR also led, in part, to the Norfolk Defendants reducing the number of inspection points, which caused or contributed to the injuries complained of.

42. The Norfolk Defendant's decision to implement PSR also led, in part, to the Norfolk Defendants permitting train crews who are less qualified (and thus less costly) than carmen to inspect trains and railcars, which caused or contributed to the injuries complained of.

43. The Norfolk Defendant's decision to implement PSR also led, in part, to the Norfolk Defendants inadequately inspecting, maintaining, repairing, and operating their hot bearing detector ("HBD") system (sometimes referred to as "hot-box detectors" or "wayside detectors")¹, which caused or contributed to the injuries complained of.

44. The Norfolk Defendant's decision to implement PSR also led, in part, to the Norfolk Defendants inadequately calibrating their HBD system, calibrating their HBD system so as to reduce warnings, and/or otherwise failing to set adequate standards, thresholds, and algorithms for providing a warning of an overheating bearing or axle, which caused or contributed to the injuries complained of.

45. The Norfolk Defendant's decision to implement PSR also led, in part, to the Norfolk Defendants permitting warning systems, algorithms, alerts, and/or alarms to be ignored or overridden relating to their HBD system, which caused or contributed to the injuries complained of.

¹ HBDs (or hotbox detectors, or wayside detectors) are devices positioned along the tracks that measure the temperature of bearings and provide a warning to the train's crew and a twenty-four-hour alert desk in Atlanta when bearing temperatures indicate potential overheating.

46. The Norfolk Defendant's decision to implement PSR also led, in part, to the Norfolk Defendants electing to use or continue to use substandard and outdated airbrakes rather than updating to a safer braking system such as Electronically Controlled Pneumatic (ECP) brakes, which can significantly reduce train stopping distances, and which caused or contributed to the injuries complained of.

47. The Norfolk Defendant's decision to implement PSR also led, in part, to the Norfolk Defendants cutting spending on safety, inspection, maintenance, and repair measures for trains and railcars, which caused or contributed to the injuries complained of.

48. The Norfolk Defendant's decision to implement PSR also led, in part, to the Norfolk Defendants cutting spending on training relating to inspection, maintenance, repair, and operation of trains and railcars, which caused or contributed to the injuries complained of.

49. The Norfolk Defendant's decision to implement PSR also led, in part, to the Norfolk Defendants cutting spending on training relating to emergency response measures, including hazardous waste emergency response measures, after a train has ceased operating or after a derailment has occurred, which caused or contributed to the injuries complained of.

50. The Norfolk Defendant's decision to implement PSR also led, in part, to the Norfolk Defendants failing to employ individuals and/or adequately staff trains to allow an individual to keep a proper lookout while the train is in operation for issues including sparks and/or fire coming from railcars, which caused or contributed to the injuries complained of.

51. The Norfolk Defendant's decision to implement PSR also led, in part, to a July 2022 audit report by the FRA finding that between January 2022 and May 2022, the Norfolk Defendants suffered from significant safety violations. **Exhibit 1**. The FRA audit report noted that the Norfolk Defendants "did not take immediate actions to remediate defective conditions" and that "these

conditions have exposed crews to increased hazards, potential property damage, and injuries due to defective equipment knowingly left in service.” Additionally, the FRA warned Norfolk Southern that “when critical components are not maintained, there is an increased risk of sudden failure with catastrophic potential.” The FRA Report also found that a “failure to properly administer and implement the program of operational testing”, which “can diminish the capacity to correct accident/incident and injury trends.” The FRA Report found “inadequate communication between the NS transportation and mechanical departments”, which led to defective conditions not reported for repair and/or not removed from service, which “may raise the overall risk of train derailment”. The Norfolk Defendants failure to address these issues and abide by these warnings caused or contributed to the injuries complained of.

52. The Norfolk Defendants implementation of PSR included, in part, the Norfolk Defendants utilizing significantly fewer signalmen. Signalmen install, repair, and maintain, signal and other systems, which railroads use to direct trains from one location to the next safely, including the Norfolk Defendants’ HBD system. Under their PSR program, the Norfolk Defendants have no such signalmen employed in or around the area of East Palestine, which was negligent and/or reckless and caused or contributed to the injuries complained of.

53. At all relevant times, the Norfolk Defendants, independently, or jointly, owned Train 32N, which derailed in East Palestine, on February 3, 2023.

54. At all relevant times, the Norfolk Defendants, independently or jointly, by and through its/their agents and employees, operated and/or controlled Train 32N.

55. At all relevant times, the Norfolk Defendants, independently or jointly, by and through its/their agents and employees, were responsible for the safe inspection, operation, maintenance, and repair of Train 32N’s railcars.

56. At all relevant times, the Norfolk Defendants, independently or jointly, owned or leased the railway that Train 32N derailed from in East Palestine, Ohio, on February 3, 2023.

57. At all relevant times, the Norfolk Defendants, independently or jointly, by and through its/their agents and employees, were responsible for the safe operation and maintenance of the railway that Train 32N derailed from in East Palestine, Ohio, on February 3, 2023.

58. At all relevant times, the Norfolk Defendants, independently or jointly, by and through its/their agents and employees, were responsible to ensure that safe hazardous material response measures were undertaken, including but not limited to the safe containment and mitigation of hazardous material spills from trains owned and/or operated by the Norfolk Defendants or by trains and railcars owned and operated by others on the railway owned and operated by them.

The Derailment of Train 32N and the Emergency Response

59. On February 3, 2023, Train 32N, owned and/or operated by the Norfolk Defendants, was traveling eastbound on the Fort Wayne Line of the Keystone Division through northeast Ohio. Train 32N was assembled in Madison, Illinois, and was destined for Conway, Pennsylvania.

60. According to media reports, the Norfolk Defendants' agents and employees were aware that Train 32N presented a safety risk on February 3, 2023, and some agents and employees had even nicknamed Train 32N "Train 32Nasty."

61. The Norfolk Defendants had equipped the Fort Wayne line with HBD's to detect overheated axles and/or wheel bearings on railcars and provide real-time warnings while a train was traveling down the tracks.

62. The Norfolk Defendants set their own standards, policies, and procedures for the placement of the HBD's and the alarm thresholds for above ambient temperature readings.

63. Norfolk Southern's thresholds in effect on February 3, 2023 were set such that if a bearing temperature reading exceeded 200°F above ambient temperature, a "critical alarm" would be triggered that required the train to be stopped, a reading of 170°F above ambient temperature triggered a "non-critical alarm," and a "953 alert" was triggered based on a trending algorithm of data to alert the (remote) Wayside Help Desk in Atlanta that a bearing may be overheating.

64. Near Sebring, Ohio, at milepost 79.8, Train 32N passed an HBD, but no alert or alarm was triggered.

65. Approximately 10 miles later, near Salem, Ohio at milepost 69.01, Train 32N passed another HBD. At around this same time, as Train 32N was traveling through Salem, Ohio at approximately 8:15pm, railcar GPLX75465 ("Car 23") was captured by surveillance cameras positioned along the railway (in Salem, Ohio) visibly on fire and emitting a shower of sparks.²

66. The HBD reading near Salem Ohio, at milepost 69.01, triggered a 953 alert, yet the Norfolk Defendants did nothing to stop Train 32N and inspect for an axle or bearing problem or overheating. Had they done so, they would have discovered Car 23's axle and/or bearing overheating and/or on fire.

67. The HBD near Salem Ohio, at milepost 69.01, and the area where the surveillance cameras captured Car 23 visibly on fire and emitting a shower of sparks, is approximately 20 miles before the derailment site in East Palestine. The reading at this HBD, which triggered a 953 alert, occurred approximately 45 minutes before Train 32N derailed.

² Reference to Car #'s within this Complaint refer to the order in which the railcars were situated, in order from front to back, but not counting the two front-end locomotives that powered and started the train. Thus, Car 23 (railcar GPLX75465, which had the critical bearing failure) would have been the 25th railway vehicle on Train 32N if the front two locomotives are counted, and the first vinyl chloride car would have been Car 28 (instead of Car 26) if the front two locomotives are counted.

68. Approximately 20 miles past the Salem HBD, near East Palestine, Ohio at milepost 49.81, Train 32N passed another HBD. That HBD recorded a temperature of 253°F above ambient temperature, triggering a “critical alarm.”

69. At this point, the engineer attempted to stop Train 32N using ~~to~~ its outdated airbrakes, but due to the Norfolk Defendants’ failures and delays, the engineer was unable to sufficiently slow Train 32N down sufficiently or bring it to a stop quickly enough before the bearing/axle on Car 23 finally failed and caused Car 23 to derail.

70. At approximately 8:54 pm., the overheated bearing/axle on Car 23 finally had a catastrophic failure that caused Car 23 to derail near railway milepost 49.5 in East Palestine, Ohio.

71. East Palestine, is a village in northeastern Columbiana County, located along the Ohio-Pennsylvania state line. The derailment occurred at or about 40.8360°N 80.5227°W.

72. Thirty-seven other railcars derailed after Car 23 derailed (38 railcars derailed in total), including eleven carrying toxic, hazardous, and dangerous chemicals. These consisted of: five railcars carrying vinyl chloride;³ one railcar carrying ethylene glycol monobutyl ether;⁴ one railcar carrying 2-ethyl hexyl acrylate;⁵ one railcar carrying butyl acrylates;⁶ one railcar carrying isobutylene;⁷ and two railcars carrying benzene residue.⁸

73. These 11 derailed tank cars that were carrying toxic, hazardous, and dangerous chemicals ignited upon derailment and fueled a large fire that damaged an additional 12 non-derailed railcars.

³ Railcars TILX402025 (“Car 26”), OCPX80235 (“Car 27”), OCPX80179 (“Car 28”), GATX95098 (“Car 29”), and OCPX80370 (“Car 53”).

⁴ Railcar SHPX211226 (“Car 34”).

⁵ Railcar DOWX73168 (“Car 36”).

⁶ Railcar UTLX205907 (“Car 48”).

⁷ Railcar NATX35844 (“Car 47”).

⁸ Railcars DPRX259013 (“Car 57”) and DPRX258671 (“Car 58”).

74. At around 11:00pm on February 3rd, a shelter in place order was issued for all of East Palestine due to the release of chemicals and fire.

75. The plume of toxic smoke and its toxic fallout (toxic soot and other toxic particulate matter) from this initial fire traveled south-east before shifting and traveling to the east, north-east. The initial fire raged over night February 3rd and over the course of February 4th and February 5th, with the toxic plume even appearing on local weather stations radar as moderate rain/snow. See Image 1, below.

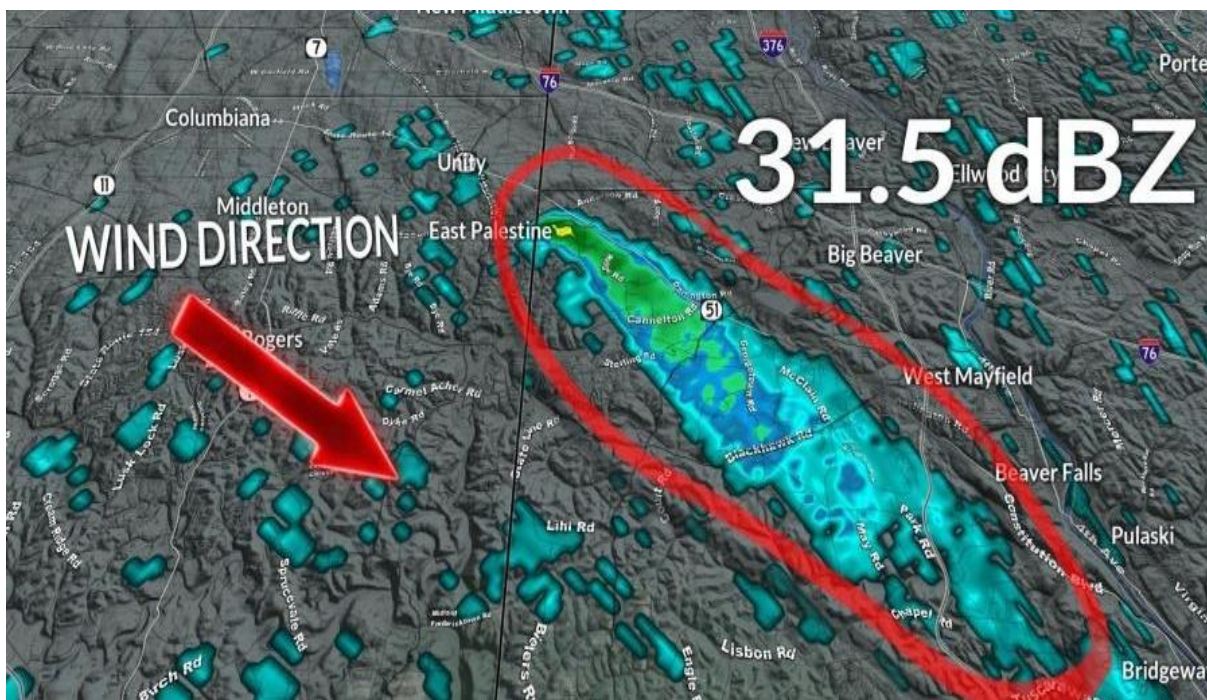


Image 1⁹

76. The evening of February 5th, Ohio Governor Mike DeWine issued an evacuation order for anyone living within a mile of the derailment site.

⁹ <https://www.wkbn.com/news/local-news/east-palestine-train-derailment/east-palestine-train-derailment-fire-was-visible-on-pittsburgh-radar/>

77. On February 6th, the evacuation was expanded to cover a one-mile by two-mile area surrounding East Palestine, including parts of both Ohio and Pennsylvania.

78. As discussed above, rather than addressing the single vinyl-chloride-carrying railcar with the failed safety relief valve and the danger this single railcar posed, the Norfolk Defendants caused, contributed to, and/or approved the implementation of a plan whereby explosives would be used to blow holes in all five vinyl-chloride-carrying railcars in order to empty/vent the entire contents of all five railcars onto/into the ground, and then let the 1,000,000 pounds of toxic vinyl chloride and other toxic chemicals (Vinyl Chloride, Dioxins, Phosgene, Hydrogen Chloride, Dipropylene Glycol, Diethylene Glycol, Ethylene Glycol Monbutyl Ether, Polyvinyl, Polypropyl Glycol, Isobutylene, Butyl Acrylates, Petro Oil, Benzene, and volatile and semi-volatile byproduct compounds and other combustible materials) burn on the spot until it all disappeared *from that particular site* and was released into the atmosphere.¹⁰

79. At approximately 4:30pm on February 6th, the Norfolk Defendants, either directly or indirectly, caused or contributed to the use of explosives to blow holes in all five of the vinyl chloride carrying derailed railcars. This so-called “controlled release” or “controlled burn” or “vent and burn” was anything but controlled.

80. The explosion and subsequent inferno released a large plume of thick black toxic smoke and toxic fallout, including toxic soot and other toxic particulate matter.

81. The toxic plume from this second explosion and fire also appeared on local weather stations, but it did not initially travel towards the east/north-east where the initial fire’s toxic plume had left off earlier. Instead, the toxic plume went mainly upwards until it reached approximately 3,000 feet and then became trapped by a weather inversion. It then spread out like a mushroom

¹⁰ One pound of vinyl chloride released into the atmosphere can contaminate five acres to a level of 2 ppm.

cloud in a roughly circular pattern around East Palestine with an approximate 30-mile radius and deposited toxic fallout. The toxic plume and its toxic fallout lingered for days before eventually travelling east, north-east. See Image 2; Image 3, below.



Image 2¹¹

¹¹ <https://pugetsoundkeeper.org/2023/02/27/east-palestine-train-derailment/>

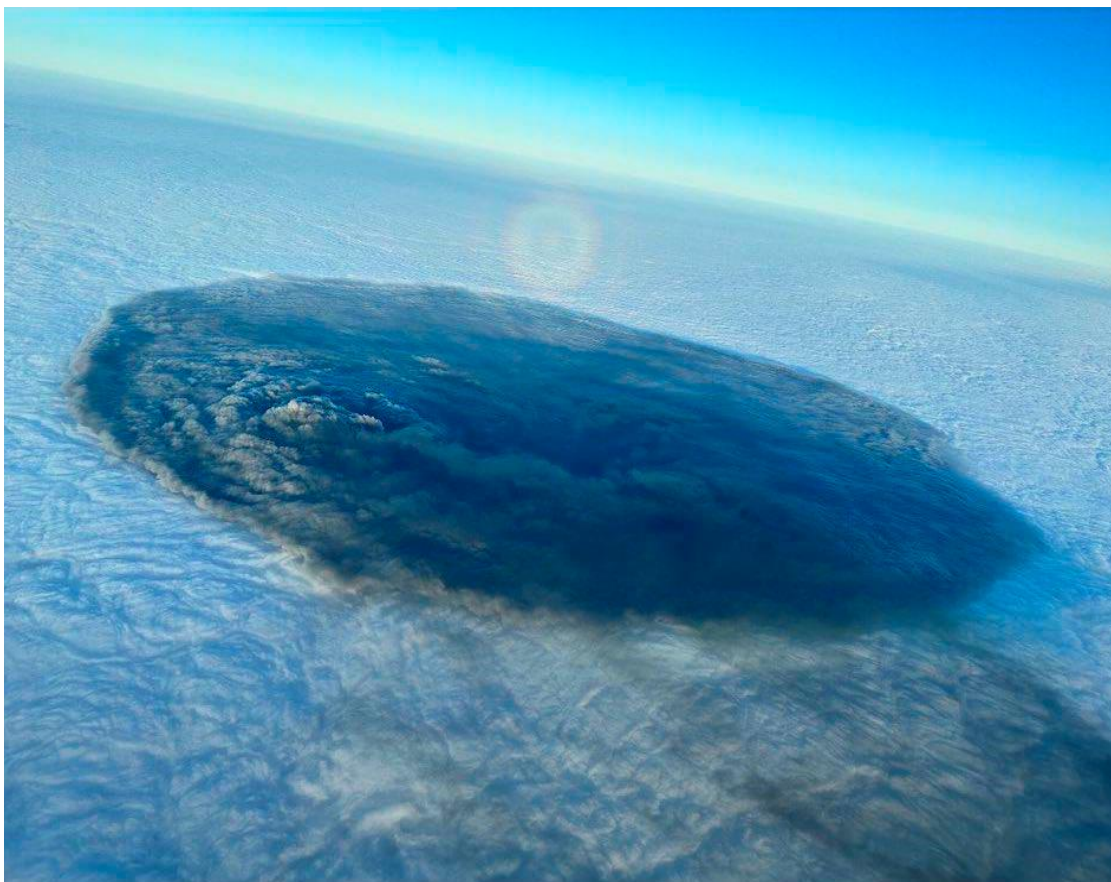


Image 3¹²

82. As discussed above, the toxic chemicals were transported over and onto the school properties, contaminating personal and real property thereon.

83. This toxic contamination has caused significant loss of the use and enjoyment of the school ~~property~~properties, past, present, and future, by the school students, including the Representative Student Plaintiffs and Student Class Members, and school employees (teachers and staff), and will require significant testing, monitoring, and remediation of the school properties, past, present, and future.

¹²<https://www.weatherandradar.com/weather-news/east-palestine-ohio-train-derailment-causes-big-problems--ce7dc4c8-28d0-4925-ae5-30ebe6c36c57>

84. Additionally, because of this toxic contamination of the school properties, school students, including the Representative Student Plaintiffs and Student Class Members, and school employees (teachers and staff) have been and continue to be exposed to greater-than-normal background levels of toxic chemicals and materials, including known human carcinogens. This school exposure will require significant expenditures by the schools for future medical and other monitoring of students and staff to take place at the schools relating to school exposure, and significant additional expenditures by the schools for additional employees to care for and treat students and staff at the schools relating to school exposure.

The Investigation of the Derailment

85. On February 14, 2023, the National Transportation Safety Board (“NTSB”) issued a preliminary Investigative Update regarding the February 3, 2023 train derailment (**Exhibit 2**), stating that: “On Feb. 3, at approximately 8:54 p.m., local time, eastbound Norfolk Southern Railway, general merchandise freight train 32N, derailed on main track 1 in East Palestine, Ohio. As a result of the derailment, 38 railcars derailed and a fire ensued which damaged an additional 12 railcars. There were 20 total hazardous material railcars in the train consist – 11 of which derailed.”

86. The NTSB’s February 14, 2023, preliminary Investigative Update also stated that “NTSB investigators have identified and examined the rail car that initiated the derailment. Surveillance video from a residence showed what appears to be a wheel bearing in the final stage of overheat failure moments before the derailment. The wheelset for the suspected railcar has been collected as evidence for metallurgical examination. The suspected overheated wheel bearing has been collected and will be examined by engineers from the NTSB Materials Laboratory in Washington D.C.” The amounts released as a result of the derailment included 688,000 pounds of

Polyvinyl, 273,394 pounds of Ethylhexyl acrylate, 273,394 pounds of Ethylene Glycol Monobutyl Ether, 206,000 pounds of Butyl Acrylates, and 1,109,400 pounds of Vinyl Chloride. (citation?)

87. The United States Environmental Protection Agency (“EPA”) sent a letter to the Norfolk Defendants dated February 10, 2023 (**Exhibit 3**) regarding the derailment, stating in part that:

- (a) The EPA has documented the release or threat of release of hazardous substances, pollutants or contaminants into the environment from the East Palestine Train Derailment Site;
- (b) Regarding the subject train, [a]pproximately 20 rail cars were listed as carrying hazardous materials;
- (c) Cars containing Vinyl Chloride, Butyl Acrylate, Ethylhexyl Acrylate, and Ethylene Glycol Monobutyl ether are known to have been and continue to be released to the air, surface soils, and surface waters;
- (d) Based on information presently available to EPA, EPA has determined that Norfolk Southern Railway Company ... may be responsible under CERCLA for cleanup of the Site or costs EPA has incurred in cleaning up the Site;
- (e) Based on the information collected during and following the incident that occurred on February 3, 2023, at approximately 8:55 PM EST in East Palestine, Ohio, EPA believes that Norfolk Southern may be liable under Section 107(a) of CERCLA with respect to the East Palestine Train Derailment Site, as a current or previous owner and/or operator of the Site;
- (f) The EPA made the following observations:
 - i. Materials released during the incident were observed and detected in samples from Sulphur Run, Leslie Run, Bull Creek, North Fork Little Beaver Creek, Little Beaver Creek, and the Ohio River.
 - ii. Materials related to the incident were observed entering storm drains.
 - iii. Multiple rail cars and tankers were observed derailed, breached, and/or on fire, that included but not limited to the following materials:

1. Vinyl chloride;
 2. Ethylene Glycol Monobutyl Ether;
 3. Ethylhexyl Acrylate
 4. Isobutylene;
 5. Butyl Acrylate;
- iv. Five rail car tankers of vinyl chloride were intentionally breached; the vinyl chloride was diverted to an excavated trench and then burned off;
 - v. Areas of contaminated soil and free liquids were observed and potentially covered and/or filled during reconstruction of the rail line including portions of the trench that was used for the open burn off of Vinyl Chloride.

88. Pennsylvania Governor Josh Shapiro sent Alan Shaw, President and CEO of Norfolk Southern Corporation, a letter dated February 14, 2023 (**Exhibit 4**), stating in part that:

- (a) Norfolk Southern failed to implement Unified Command, creating confusion and resulting in a general lack of awareness for first responders and emergency management of the tactics Norfolk Southern planned in response;
- (b) Norfolk Southern gave inaccurate information and conflicting modeling about the impact of the controlled release that made protective action decision making more difficult in the immediate aftermath of the derailment; and,
- (c) Norfolk Southern's unwillingness to explore or articulate alternate courses of action to their proposed vent and burn limited state and local leaders' ability to respond effectively.

89. On February 21, 2023, the EPA issued its Unilateral Administrative Order for Removal Actions (**Exhibit 5**, without appendices), containing the following findings of fact, in pertinent part:

- (a) The East Palestine Train Derailment Site is located within a mixed-use residential, commercial, and industrial area, with residential properties northwest, southeast, and south of the derailment area. Residential properties are also located along contaminated waterways which became contaminated after the derailment and are within the affected area. The Ohio-Pennsylvania border is located less than a mile from the derailment location. The nearest public well supply is located approximately one (1)

mile from the derailment location. A ditch, located on the south side of the tracks flows west for approximately 1,000 feet before it empties into Sulphur Run, which joins Leslie Run, to Bull Creek, to North Fork Little Beaver Creek, to Little Beaver Creek before emptying into the Ohio River. Wetlands and State Line Lake are located immediately adjacent to the Northeast of the Site...

- (b) A train derailment occurred at approximately 2055 eastern standard time (EST) on February 3, 2023, in East Palestine, Columbiana County, Ohio, less than a mile from the Ohio-Pennsylvania border. Norfolk Southern Railway Company reported the incident at 2253 EST to the National Response Center (NRC). Federal, state, and local officials arrived on scene after the derailment. EPA mobilized to the Site with EPA Superfund Technical Assessment and Response Team (START) at approximately 2330 EST on February 3, 2023...
- (c) At the time of the initial report, the number of derailed rail cars (of the 149) was unknown but 20 of the rail cars were listed by Norfolk Southern Railway Company as carrying hazardous materials, described as: Vinyl Chloride, Stabilized (5); Sulfuric Acid (5); Ethylene Glycol Monobutyl Ether (1); Butyl Acrylate, Stabilized (2); Combustible Liquids nos (1); Isobutylene (1) Ethyl-Hexyl Acrylate(1); Empty Residue – last contained liquified petroleum gas (LPG) (1); Residue – last contained Benzene (2).
- (d) The derailment resulted in a large fire affecting numerous rail cars, including rail cars carrying hazardous materials, although the status (e.g. breached, burning, etc.) was initially unknown due to safety concerns associated with the fire as well as the position of the derailed cars, which affected the ability of responders to identify which rail cars were actively breached and/or burning. Initially, a shelter-in-place order was recommended, and firefighting efforts were stood down due to safety concerns; however, an evacuation order was enacted by the Village of East Palestine on February 4, 2023. The fire continued to burn throughout the following days. Local citizens reported smoke from the fire observed over the State of Ohio and the Commonwealth of Pennsylvania.
- (e) Southern Railway Company provided response officials at the Site, including EPA, with a list of the contents of the rail cars which derailed at the Site...On February 3, 2023, at 2201 EST, Norfolk Southern Railway Company provided response officials at the Site with a consist (manifest) which details the volume of materials in each rail car. ... Rail cars 23 through 74 were the rail cars which derailed, eleven of which contained hazardous materials...
- (f) Releases of hazardous substances occurred after the derailment and subsequent fires Releases to the air occurred when hazardous substances

spilled from the rail cars, when smoke from burning rail cars was produced, and hazardous substances including vinyl chloride, phosgene and hydrogen chloride were released. Releases to surface water occurred when liquid product exited rail cars and also when runoff from firefighting efforts at the derailment location moved through a ditch to Sulphur Run, which joins Leslie Run, to Bull Creek, to North Fork Little Beaver Creek, to Little Beaver Creek, and then the Ohio River. Releases to soil occurred (1) when liquid product exited rail cars after the derailment (2) when run-off from firefighting efforts at the derailment location flowed from the right-of-way to adjoining property, and (3) when ash from the burns landed on soil. Local citizens reported smoke from the burns observed over the State of Ohio and the Commonwealth of Pennsylvania.

- (g) The following are health/environmental effects associated with the hazardous materials involved in the derailment, or were detected in air, water, soil, and sediment samples, or were combustion by-products of some of those chemicals at the Site:
- i. Vinyl Chloride: Breathing high levels of vinyl chloride can cause dizziness or sleepiness. Breathing very high levels can cause fainting and breathing even higher levels can cause death. Studies have shown chronic inhalation of vinyl chloride for several years causes changes in the structure of the liver, and individuals who breath high levels are more likely to experience these changes. Highly exposed workers have also developed liver cancer (angiosarcoma of the liver). The effects of ingesting high levels of vinyl chloride are unknown. Dermal exposure may cause numbness, redness, and blisters. Animal studies have shown that exposure to vinyl chloride during pregnancy can affect the growth and development of the fetus. Vinyl chloride is a known human carcinogen according to the Department of Health and Human Services (DHHS), the International Agency for Research or Cancer (IARC), and the EPA.
 - ii. Ethylene Glycol Monobutyl Ether: Routes of exposure include ingestion and dermal contact. Inhaling Ethylene glycol monobutyl ether can irritate the nose and throat. It can also cause nausea, vomiting, diarrhea, and abdominal pain. Exposure can cause headache, dizziness, lightheadedness, and passing out. It may damage the liver and kidneys.
 - iii. Isobutylene: Acute exposure to isobutylene is associated with the following health effects: irritation of eyes, nose, and throat; dermal contact can cause frostbite; headache, dizziness, lightheadedness, and fatigue. Higher levels of isobutylene can cause coma and death. Chronic health hazards include cancer hazard, reproductive hazard, and other long-term health effects.

- iv. Benzene: Breathing very high levels of benzene can result in death, while high levels can cause drowsiness, dizziness, rapid heart rate, headaches, tremors, confusion, and unconsciousness. Exposure through ingestion can cause vomiting, irritation of the stomach, dizziness, sleepiness, convulsions, rapid heart rate, and death. The major effect of benzene from chronic exposure is on the blood. Benzene causes harmful effects on the bone marrow and can cause a decrease in red blood cells leading to anemia. It can also cause excessive bleeding and can affect the immune system, increasing the chance of infection. benzene may affect menstruation and decrease the size of ovaries in women following many months of exposure to high levels. Benzene is a known human carcinogen according to the Department of Health and Human Services, the International Agency for Research or Cancer (IARC), and the EPA.
- v. Butyl Acrylate: Butyl acrylate can cause health effects due to inhalation and through dermal contact. Contact with butyl acrylate can irritate the nose, throat, and lungs. Butyl acrylate may cause a skin allergy. Exposure to butyl acrylate can cause headache, dizziness, nausea, and vomiting. Repeated exposure can lead to permanent lung damage.
- vi. Phosgene: Exposure to phosgene in the air can cause eye and throat irritation. High amounts in the air can cause severe lung damage. Exposure can occur through inhalation, dermal contact, or (less likely) ingestion. Higher levels of phosgene can cause lungs to swell, making it difficult to breathe. Even higher levels can result in severe lung damage that might lead to death. Dermal contact with phosgene can result in chemical burns or may cause frostbite.
- vii. Hydrogen Chloride: Hydrogen chloride is irritating and corrosive to any tissue it contacts. Brief exposure to low levels causes throat irritation. Exposure to higher levels can result in rapid breathing, narrowing of the bronchioles, blue coloring of the skin, accumulation of fluid in the lungs, and even death. Exposure to even higher levels can cause swelling and spasm of the throat and suffocation. Some people may develop an inflammatory reaction to hydrogen chloride. This condition is called reactive airways dysfunction syndrome (RADS), a type of asthma caused by some irritating or corrosive substances. Depending on the concentration, hydrogen chloride can produce conditions from mild irritation to severe burns of the eyes and skin. Long-term exposure to low levels can cause respiratory problems, eye and skin irritation, and discoloration of the teeth. Swallowing concentrated hydrochloric acid will cause severe corrosive injury to the lips, mouth, throat, esophagus, and stomach.

(h) Acrylate odors were noted by responders during indoor air monitoring.

- (i) Acrylate odors along Sulphur Run, Leslie Run, Bull Creek, North Fork Little Beaver Creek, and Little Beaver Creek were noted by responders during sampling and containment activities.
- (j) ODNr reported an estimated number of aquatic animals killed at approximately 3,500. Those aquatic animals were found in Sulphur Run, Leslie Run, Bull Creek, and a portion of the North Fork of Beaver Creek. Most of the fish appear to be small suckers, minnows, darters, and sculpin. Most of these deaths are believed to have been caused by the immediate release of contaminants into the water.

90. On March 22, 2023, the Chair of the NTSB characterized the derailment as “**100% preventable**” in her testimony before the U.S. Senate Environment and Public Works Committee.

Defendants Oxy Vinyls, GATX, GAMC, and TILC

91. At all relevant times, Oxy Vinyls was the owner of railcars OCPX80235 (“Car 27”), OCPX80179 (“Car 28”), and OCPX80370 (“Car 53”), and was the shipper of the vinyl chloride in these railcars when Train 32N derailed on February 3, 2023.

92. Oxy Vinyls was also the shipper of two other railcars carrying vinyl chloride when Train 32N derailed on February 3, 2023 – TILX402025 (“Car 26”), owned by Defendant Trinity Industries Leasing Company, and GATX95098 (“Car 29”), owned by Defendant GATX Corporation, which these Defendants leased to Oxy Vinyls.

93. At all relevant times, Oxy Vinyls, as owner of Car 27, Car 28, and Car 53 and as shipper of the vinyl chloride in all five of the railcars that contained same and derailed, was responsible to ensure that tank cars transporting hazardous materials are certified with proper and reliable safety information in case of an emergency and for complying with a variety of compliance and maintenance measures for tank cars that carry hazardous materials.

94. In the aftermath of the derailment and vent and burn, the FRA found discrepancies between the approved documents for the Oxy Vinyls-owned tank cars and the actual physical characteristics of the cars, including: (i) missing or incorrect information; (ii) unapproved and

undocumented modifications; and (iii) unapproved and undocumented modification of component parts.

95. Shippers such as Oxy Vinyls are responsible for the proper loading and labeling of tank cars, which includes federal certification of the proper packaging of the commodity and placement of tank car placards. *See* 49 C.F.R. §§ 173.31, 172.508. Shippers must also provide a safety data sheet (“SDS”) for each hazardous chemical they produce or import that identifies, among other items, accidental release measures, stability and reactivity, and fire-fighting measures.

96. The vinyl chloride SDS prepared by Oxy Vinyls and provided to Norfolk Southern warned of the risks of polymerization and explosion if the vinyl chloride is exposed to “air, sunlight, excessive heat” and/or “Catalytic metals, such as copper, aluminum, and their alloys.”

97. At all relevant times, GATX was the owner of Car 29, carrying vinyl chloride when Train 32N derailed on February 3, 2023.

98. At all relevant times, GATX, as owner of Car 29, was responsible to ensure that tank cars transporting hazardous materials are certified with proper and reliable safety information in case of an emergency and for complying with a variety of compliance and maintenance measures for tank cars that carry hazardous materials.

99. After the derailment, the FRA identified three problems with the approval documents for Car 29 as compared to its actual physical characteristics. First, the car had never been approved for vinyl chloride transport; secondly, the original tank car valve had been replaced with a Midland 720 valve without approval; third, the car’s original pressure relief device (“PRD”), which had a 225-psi start, had been replaced with a PRD with a 247.5-psi start without approval, and lastly, all three vinyl chloride carrying railcars owned by Oxy Vinyls – Cars 27, 28, and 53 – had missing or

incorrect information on their AAR (Association of American Railroads) Form 4-2. For example, Car 27 had modifications that were not properly documented or approved, including changes to component parts that modified the material from carbon to stainless steel.

100. These discrepancies violate federal regulations. Additionally, despite the known risk of polymerization upon an interaction between vinyl chloride and catalytic metals including aluminum, Car 29 was fitted with a protective housing cover made of aluminum; aluminum was also found in the exterior debris of the protective housing and housing cover following the derailment, and the angle valves were covered in solidified melted aluminum.

101. At all relevant times, GAMC was the owner of railcar GPLX75465 (“Car 23”) when Train 32N derailed on February 3, 2023. Car 23 is the railcar that commenced the derailment of Train 32N when a wheel bearing on Car 23 failed. Alternatively, GATX was the owner of Car 23.

102. At all relevant times, GAMC or alternatively GATX, as owner of Car 23 was responsible to ensure that the rail car was certified with proper and reliable safety information in case of an emergency and for complying with a variety of compliance and maintenance measures.

103. The bearing on Car 23 was manufactured by Timken Company. The manual for installing the bearing provides “[c]ars, coaches, and locomotives equipped with roller bearings that remain stationary should be moved one car length every six months to distribute lubricant over the bearing surfaces.” Timken’s guidance is consistent with industry practice to prevent railcars from sitting stationary for long periods which negatively impacts bearing functionality.

104. At all relevant times, GAMC or alternatively GATX, as owner of Car 23 was responsible for inspecting and maintaining the bearing that failed, including but not limited to inspecting and maintaining it, providing proper lubrication and other needed maintenance of the bearing, and ensuring that Car 23 was moved at least one car length every six months.

105. Records for Car 23 indicates that it had been stationary for longer than six months at least twice. In August 2018 Car 23 did not move for 565 days. In May 2019 it was stationary for 206 days. GAMC's, or alternatively GATX's, failure to move Car 23 every six months, and failure to inspect, lubricate, and otherwise maintain the bearing resulted in the internal degradation and ultimate failure of Car 23's bearing and derailment of Train 32N.

106. At all relevant times, TILC was the owner of Car 26, carrying vinyl chloride when Train 32N derailed on February 3, 2023.

107. At all relevant times, TILC, as owner of Car 26, was responsible to ensure that tank cars transporting hazardous materials are certified with proper and reliable safety information in case of an emergency and for complying with a variety of compliance and maintenance measures for tank cars that carry hazardous materials.

108. After the derailment, the FRA identified problems with the approved documentation for Car 26 as compared to its actual physical characteristics, revealing that Car 26 was not constructed and maintained in a manner consistent with its certification. The discrepancies included changes to the PRDs, valves, and component parts that had not been approved, rendering them unfit for the transportation of vinyl chloride. Additionally, despite the known risk of polymerization occurring from interaction between vinyl chloride and catalytic metals including aluminum, samples of the interior surface of the manway nozzle of Car 26 revealed the presence of aluminum, and aluminum was also found on the car's PRD springs.

CLASS ALLEGATIONS

109. The Representative School District Plaintiffs bring this action on behalf of themselves and all other similarly situated school districts pursuant to Fed.R.Civ.P. 23(a) and 23(b)(1), (2), and (3).

110. The Representative School District Plaintiffs propose to represent a School District Class defined as school districts who owned or operated school facilities in Pennsylvania within a 30-mile radius of the derailment site (40.8360684°N – 80.5215884°W) between February 3, 2023 and the date of class certification.

111. The Representative Student Plaintiffs bring this action on behalf of themselves and all others similarly situated pursuant to Fed.R.Civ.P. 23(a) and 23(b)(1), (2), and (3).

112. Representative Student Plaintiffs propose to represent a Student Class defined as all students who attended a school district in the School District Class between February 3, 2023 and the date of class certification.

113. The Representative Plaintiffs reserve the right to amend these class definitions, including adding classes and subclasses, after discovery.

114. The classes are so numerous that joinder of all members is impractical.

115. The size of the classes, and any trial, would be readily manageable.

116. There are questions of law or fact common to the classes that predominate. These include, though are not limited to, the following:

- (a) Whether the Defendants engaged in reckless, negligent, ultrahazardous, or intentional acts and omissions;
- (b) Whether such acts and omissions were a breach of the Defendants' duty of care to the Representative Plaintiffs and class members;
- (c) Whether such acts and omissions directly and proximately caused the subject derailment;
- (d) Whether the subject derailment caused the Representative Plaintiffs and class members to suffer damages.

117. The Defendants have acted or refused to act on grounds generally applicable to the classes, thereby making appropriate final relief with respect to the classes.

118. The Representative Plaintiffs and the class members have substantive claims that are similar, if not identical, in all material respects, and will require proof of the same kind and application of the same laws.

119. The Representative Plaintiff's claims are typical of those of the classes. All are based on the same factual and/or legal theories. Plaintiffs and class members all suffered damages as a result of the subject train derailment, which Plaintiffs allege was caused by the negligent, reckless, ultrahazardous, and/or intentional acts and omissions of the Defendants.

120. The Representative Plaintiffs will fairly and adequately represent and protect the interests of the classes.

121. The Representative Plaintiffs are represented by counsel competent and experienced in both consumer protection and class action litigation.

122. The Representative Plaintiffs have no conflict with class members in the maintenance of this action, and their respective claims are identical to or at least typical of claims of the class members.

123. Because most class members either do not know that their rights have been violated, could not economically justify the effort and expense required to litigate their individual claims or have little interest in, or ability to, prosecute an individual action, due to the complexity of the issues involved in this litigation, a class action is the most practical proceeding in which they can recover.

124. A class action is superior to other available means for the fair and efficient adjudication of this controversy since individual joinder of all class members is impracticable. This class action represents the most fair and efficient method of adjudicating this controversy.

125. There are no unusual legal or factual issues that would cause management problems not normally and routinely handled in class actions.

126. The questions of law and fact common to the classes predominate over any questions affecting only individual members.

127. If each of the class members were forced to bring individual suits, this would burden judicial resources and would create the risk of multiple inconsistent results for similarly situated parties. A class action will serve the goals of judicial economy and ensure uniformity of decision.

CLAIMS

COUNT I

Negligence and Negligence Per Se

128. Plaintiffs incorporate all preceding paragraphs as if fully set forth herein.

129. The derailment, release of toxic chemicals, fire, and then the explosion and uncontrolled release of toxic chemicals was caused by the joint negligence, carelessness, and/or recklessness of the Norfolk Defendants.

130. The derailment, release of toxic chemicals, fire, and then the explosion and uncontrolled release of toxic chemicals was caused by defective, unfit and/or unsafe equipment, which was in the care, custody, and control of the Norfolk Defendants, whom knew or should have known of the dangerous, unfit and/or defective condition of this equipment and are therefore liable for them.

131. The Norfolk Defendants owed a duty to use reasonable care in the transportation of hazardous materials. Consistent with federal regulations, industry practices and procedures, and/or internal operating procedures, these duties include, but are not limited to, the duty to:

- a. Properly inspect trains and railcars;

- b. Inspect and remedy defects in equipment, including but not limited to railcar bearings and/or axles, and remove all railcars that are unsafe;
- c. Not place in service or continue in service a railcar, such as Car 23, that had been stationary for longer than six months at least twice (565 days in August 2018 and 206 days in May 2019), against bearing manufacturer guidelines.
- d. Not accept or transport any shipment of hazardous material that has pressure relief devices made of materials that are incompatible with the lading;
- e. Maintain a vigilant lookout during the operation of its trains and railcars;
- f. Adequately staff positions that would maintain a vigilant lookout during the operation of its trains and railcars;
- g. Not ignore or otherwise override any warning, alarm, or alert, including but not limited to 953 alerts, indicative of an overheating bearing and/or axle, and/or not have a policy allowing same;
- h. Properly inspect, maintain, repair, test, calibrate, and operate its HBD system, including setting appropriate alarm thresholds, algorithms, and other criteria for determining when a potentially dangerous condition exists; and ensuring that such detectors are timely and properly inspected, maintained, repaired, tested, calibrated and operating adequately;
- i. Have an adequate and up-to-date braking system;
- j. Immediately notify train dispatchers about fires on roller bearings and/or axles;
- k. Operate, maintain, inspect and/or repair the railway and railcars to ensure the safe and proper operation of the railway and railcars, particularly when transporting hazardous materials such as in this case;
- l. Adequately staff positions that inspect, maintain, repair, and operate the transportation of hazardous materials by railcar;
- m. Adequately staff positions that plan, prepare, coordinate, and oversee transportation of hazardous materials by railcar;
- n. Ensure proper procedures or systems to timely identify any malfunctions of the railway and railcars;
- o. Ensure proper safety procedures in the event of a mechanical malfunction of the railway or railcars;

- p. Ensure a proper mechanism for stopping or slowing malfunctioning railcars in a timely manner to avoid a derailment;
- q. Properly loading railcars and avoiding placement of heavier cars in the rear, considering whether the planned route is downhill and the weight and length of the train;
- r. Prevent over-loading the train with too many railcars and/or too much weight;
- s. Give accurate information and modeling regarding the (so called) controlled explosion (or vent and burn) and the impact of same;
- t. Hire, train, manage, oversee, and supervise their agents, servants, and/or employees, including but not limited to the train engineer and dispatcher concerning the operation of Train 32N on February 3, 2023;
- u. Properly determine the adequacy and skill of their agents, servants, and/or employees, including but not limited to, the train engineer, conductor and dispatcher, concerning the operation of Train 32N on February 3, 2023;
- v. Ensure that their agents, servants, and/or employees, including but not limited to, the train engineer and dispatcher, were properly and adequately instructed and trained while transporting hazardous substances, including, but not limited to, vinyl chloride;
- w. Maintaining an appropriate speed on the railway, considering whether the planned route is downhill and considering the weight and length of the train;
- x. Properly instruct and adequately train their agents, servants, and/or employees, concerning safety and emergency procedures in the event of a possible derailment;
- y. Route railcars carrying hazardous materials in such a way as to avoid populated areas in order to minimize the risk of accidental exposure;
- z. Adequately warn those in danger of imminent exposure to hazardous chemicals;
- aa. Institute proper procedures and training for response to derailment of railcars containing hazardous materials and to avoid exposing hazardous materials to the environment;
- bb. Have an adequate emergency response plan to contain and prevent the spread of hazardous materials into the surrounding environment and elsewhere and into the atmosphere;

- cc. Adequately train its agents and employees to contain and prevent the spread of hazardous materials into the surrounding environment and elsewhere and into the atmosphere;
- dd. Ensure that its agents and employees contain and prevent the spread of hazardous materials into the surrounding environment and elsewhere and into the atmosphere;
- ee. Timely implement the emergency response plan;
- ff. Develop and implement risk reduction programs;
- gg. Develop and implement risk-based hazard management programs;
- hh. Develop and implement safety performance evaluation processes;
- ii. Transport and handle hazardous materials in a manner which would not cause Plaintiffs and Class Members harm;
- jj. Evacuate an appropriate geographical area to avoid exposing persons nearby to hazardous materials and causing injury;
- kk. Accurately make known the risk of catastrophic injury and illness from exposure to hazardous materials, including vinyl chloride, dioxins, phosgene, hydrogen chloride, dipropylene glycol, diethylene glycol, ethylene glycol monbutyl ether, polyvinyl, polypropyl glycol, isobutylene, butyl acrylates, petro oil, benzene, and volatile and semi-volatile byproduct compounds and other combustible materials, to persons at risk of exposure, including those outside the evacuation zone;
- ll. Contain the spread of hazardous materials and by-products, including vinyl chloride, dioxins, phosgene, hydrogen chloride, dipropylene glycol, diethylene glycol, ethylene glycol monbutyl ether, polyvinyl, polypropyl glycol, isobutylene, butyl acrylates, petro oil, benzene, and volatile and semi-volatile byproduct compounds and other combustible materials;
- mm. Ensure that it/they are not engaging in negligent conduct.

132. The Norfolk Defendants breached their duty of care as described herein and violated federal regulations, industry practice and procedures, and/or internal operating procedures, causing the harm alleged.

133. The damages to Plaintiffs and Class Members were also caused, ~~by~~ or aggravated, by the fact that the Norfolk Defendants failed to act appropriately following the derailment in order to mitigate the danger and harm associated with the derailment.

134. Additionally, the Federal Rail Safety Act (“FRSA”), 49 U.S.C. § 20101 et seq., and its accompanying regulations are implemented to promote safe railroad operations and reduce railroad-related accidents and incidents. 49 U.S.C. § 20101.

135. The derailment is under investigation by the NTSB. Plaintiffs are unaware of the full extent of the federal or state safety laws and regulations that Defendants or their agents may have violated and reserve the right to rely on the violations of such safety laws and regulations as revealed in the NTSB or other investigations and as revealed in discovery.

136. However, upon information and belief, the Norfolk Defendants’ conduct violated one or more regulations, including but not limited to the following:

- a. 49 CFR Part 215, including but not limited to 49 CFR § 215.9, 49 CFR §215.13, 49 CFR §215.15, 49 CFR §215.105, 49 CFR §215.115, Appendix B of CFR Part 215, and Appendix D of 49 CFR Part 215.
- b. 49 CFR Part 229, including but not limited to 49 CFR § 229.7, and 49 CFR §229.29.
- c. 49 CFR Part 232, including but not limited to 49 CFR §232.103 and 49 CFR §232.109.
- d. 49 CFR Part 271, including but not limited to 49 CFR §271.101, 49 CFR §271.103, 49 CFR §271.211, and 49 CFR §271.213.
- e. 49 CFR Part 174, including but not limited to 49 CFR §174.3.
- f. 49 CFR Part 179, including but not limited to 49 CFR §179.15.

137. The Norfolk Defendants’ violation of such safety laws and regulations constitutes negligence and negligence *per se*.

138. Additionally, the FRSA authorizes the Norfolk Defendants to adopt and enforce “additional or more stringent requirements not inconsistent with” the regulations. Upon information and belief, the Norfolk Defendants adopted a comprehensive set of operating rules which apply to their operations, and Defendants violated their own operating rules, including, but not limited to, Operating Rule 140 regarding train inspections.

139. As the owner of Car 23, GAMC, or alternatively GATX, were responsible for inspecting, maintaining, repairing, and delivering a railcar for service in a safe condition.

140. GAMC, or alternatively GATX, are responsible for inspecting, maintaining, and delivering a railcar, such as Car 23 in this case, for service in a safe condition.

141. As owner of Car 23, GAMC, or alternatively GATX, breached their duty to exercise reasonable care, and were negligent, including but not limited to:

- a. Allowing Car 23 to be used in rail service with a defective wheel bearing;
- b. Allowing Car 23 to be used in rail service without properly inspecting the wheel bearing;
- c. Allowing Car 23 to be used in rail service without properly maintaining the wheel bearing; and
- d. Allowing Car 23 to be stationary for long periods of time, in excess of six months, without inspecting, maintaining or replacing the wheel bearing.

142. As the owner of certain railcars, and the shipper of the toxic Vinyl Chloride, using the Norfolk Defendants railway, Oxy Vinyls, GATX, and TILC are each responsible for using only those railcars that are approved for use under applicable federal regulations and industry standards including, but not limited to, 49 C.F.R. §§ 180.501, 180.507, 180.590 and 180.517.

143. As the owner of certain railcars and the shipper of the toxic Vinyl Chloride, using the Norfolk Defendants railway, Oxy Vinyls, GATX, and TILC are each responsible for using only those railcars that are constructed, repaired, replaced, and maintained consistent with their

approvals and certifications for use under applicable federal regulations and industry standards including, but not limited to, 49 C.F.R. §§ 180.501, 180.507, 180.590 and 180.517.

144. As the owner of certain railcars, and the shipper of the toxic Vinyl Chloride, using the Norfolk Defendants railway, Oxy Vinyls, GATX, and TILC are each responsible for using only those railcars that are compatible with the lading or goods to be transported within them under applicable federal regulations, industry standards, and internal operating procedures, including, but not limited to, 49 C.F.R. §§ 180.501, 180.507, 180.590 and 180.517.

145. Despite the applicable federal regulations, industry standards, and internal operating procedures, Cars 26, 27, 28, 29 and 53 – all of which were owned, leased and/or used by Oxy Vinyls, GATX, and TILC – were either unapproved, uncertified or incompatible for use with vinyl chloride in at least the following respects, in violation of federal regulations:

- a. Car 26 was physically constructed and/or in a physical state that was inconsistent with its approved certificate of construction;
- b. Car 27 was fitted with modifications that were not part of its approved certificate of construction;
- c. Cars 27, 28 and 53 were each accompanied by defective and/or incomplete certificates of construction;
- d. Cars 26, 27, 28 and 53 were each constructed with aluminum in their pressure relief devices (“PRD”), PRD protective housings, handwheels and angle handwheels; and
- e. Car 29 was fitted with an unapproved pressure relief device (“PRD”) and was not specially approved for use with vinyl chloride.

146. Oxy Vinyls, GMAC, GATX and TILC’s failure to ensure these Cars were approved, certified, and/or compatible with the use of vinyl chloride constitutes a breach of duties established in the federal regulations, as well as the obligation imposed by the American Association of Railroads rules and standards authorized by federal regulations, which, in combination with the

acts and omissions of the Norfolk Defendants as set forth herein, directly and proximately caused or contributed to the release of hazardous materials, including vinyl chloride.

147. Defendants Oxy Vinyls', GATX's, GAMC's, and TILC's violations of such safety laws and regulations constitute negligence and negligence *per se*.

148. The Defendants' conduct averred herein constitutes recklessness, willful and wanton conduct, and/or actual malice, and shows a conscious disregard of the rights and safety of other persons (including the Representative Plaintiffs and class members) that has a great probability of causing substantial harm. Therefore, punitive damages are warranted against each Defendant.

COUNT II Strict Liability

149. Plaintiffs incorporate all preceding paragraphs as if fully set forth herein.

150. The Defendants engaged in abnormally dangerous and ultrahazardous activity, and the Defendants are strictly liable for harm resulting from such activity.

151. Restatement (Second) of Torts §519: "One who carries on an abnormally dangerous activity is subject to liability for harm to the person, land or chattels of another resulting from the activity, although he has exercised the utmost care to prevent the harm."

152. Restatement (Second) of Torts §520: "In determining whether an activity is abnormally dangerous, the following factors are to be considered:

- (a) Existence of a high degree of risk of some harm to the person, land or chattels of others;
- (b) Likelihood that the harm that results from it will be great;
- (c) Inability to eliminate the risk by the exercise of reasonable care;
- (d) Extent to which the activity is not a matter of common usage;
- (e) Inappropriateness of the activity to the place where it is carried on; and,

- (f) Extent to which its value to the community is outweighed by its dangerous attributes.”

153. The transportation of the hazardous, toxic, and dangerous chemicals and materials by train (or in the alternative the transportation of vinyl chloride by train) was an ultrahazardous and abnormally dangerous activity for reasons including but are not limited to the following:

- (a) Such transportation creates a high degree of risk of some harm to the person, land or chattels of others. Derailments are very common, as can be seen by the numerous freight train derailments in the United States per year (1,242 in 2019, 1,013 in 2020, 1,002 in 2021, and 1,044 in 2002¹³);
- (b) The likelihood that harm will result from this activity is great. These trains travel past private land and through many densely populated areas, thus any derailment and subsequent release of chemicals will harm surrounding properties and populations;
- (c) Even with the exercise of reasonable care, such derailments would still have happened;
- (d) The transportation of hazardous chemicals is strictly regulated by the government, and is not an activity that is commonly engaged in;
- (e) As can be seen by the accident in East Palestine, hazardous chemicals are routinely transported through populated areas, which is inappropriate, as these common derailments can result in the forced evacuations of thousands of people; and,
- (f) The value to the community of transportation of hazardous chemicals, especially through populated areas, is outweighed by its dangerous attributes.

154. Employees or agents of the Norfolk Defendants carried out a (so called) “controlled” explosion (or vent and burn) of the five tanker cars that were at risk of explosion in order to breach the tanker railcars and vent/drain the contents onto/into the ground. The hazardous, toxic, and dangerous chemicals and materials were then set on fire. This was an ultrahazardous and abnormal activity, because:

¹³ <https://safetydata.fra.dot.gov/officeofsafety/publicsite/summary.aspx>

- (a) Breaching the tanker railcars and venting/draining the contents onto/into the ground and then burning the toxic, hazardous, and dangerous chemicals – which releases other toxic, hazardous, and dangerous chemicals and materials as a byproduct (including but not limited to phosgene and hydrogen chloride), creates a high degree of risk of some harm to the person, land or chattels of others;
- (b) It is likely that harm will result from breaching the tanker railcars, venting/draining the contents onto/into the ground, and then burning the toxic, hazardous, and dangerous chemicals;
- (c) Even with the exercise of reasonable care, harm would result from breaching the tanker railcars, venting/draining the contents onto/into the ground, and then burning the toxic, hazardous, and dangerous chemicals;
- (d) This is not an activity that is commonly engaged in;
- (e) Having this toxic burn pit in a populated area was inappropriate. There is no safe way to conduct such activity. It caused the mandatory evacuation of the entire town of East Palestine and some surrounding areas for five days. Others voluntarily evacuated; and,
- (f) The value to the community of from breaching the tanker railcars, venting/draining the contents onto/into the ground, and then burning the toxic, hazardous, and dangerous chemicals is outweighed by its dangerous attributes.

155. Defendants are strictly liable for the harm suffered by the Representative Plaintiffs and class members resulting from the operation of the subject train, the derailment, and subsequent response.

156. As a result of the Defendants' actions and omissions as set forth herein, the Representative School District Plaintiffs and School District Class members have been harmed, including but not limited to medical and health issues for their students and staff; testing and monitoring the impact on their property and water sources; monetary expenses relating to evacuation and/or cleanup of their property and/or drinking water; monetary expenses related to remedial measures taken by public school districts and private schools to ensure safe and clean air

and water at school facilities; damage to personal property and real property, loss of use and enjoyment of property, and expenses of future medical monitoring.

157. As a result of the Defendants' actions and omissions as set forth herein, the Representative Student Plaintiffs and Student Class Members were harmed, including, but not limited to, suffering physical and emotional injuries, increased risk of disease, and expenses of future medical monitoring.

158. Defendants' conduct averred herein constitutes willful and wanton conduct, and actual malice, and shows a conscious disregard of the rights and safety of other persons (including the Representative Plaintiffs and class members) that has a great probability of causing substantial harm. Punitive damages are warranted.

COUNT III

Private Nuisance

159. Plaintiffs incorporate all preceding paragraphs as if fully set forth herein.

160. Pursuant to the Restatement (Second) of Torts, §821D, "A private nuisance is a nontrespassory invasion of another's interest in the private use and enjoyment of land."

161. Pursuant to the Restatement (Second) of Torts, §822:

One is subject to liability for a private nuisance if, but only if, his conduct is a legal cause of an invasion of another's interest in the private use and enjoyment of land, and the invasion is either:

- (a) Intentional and unreasonable, or
- (b) Unintentional and otherwise actionable under the rules controlling liability for negligent or reckless conduct, or for abnormally dangerous conditions or activities.

162. The derailment and resulting release of toxic, hazardous, and dangerous chemicals and materials resulted in a private nuisance – an invasion of the Representative Plaintiff's and class members' interests in the private use and enjoyment of land.

163. This invasion was the direct and proximate result of the Defendants' (1) negligent conduct, or (2); intentional, reckless conduct, and/or abnormally dangerous activities and/or conditions.

164. As a result of this private nuisance, the Representative School District Plaintiffs and School District Class members have been harmed, including but not limited to medical and health issues for their students and staff; testing and monitoring the impact on their property and water sources; monetary expenses relating to evacuation and/or cleanup of their property and/or drinking water; monetary expenses related to remedial measures taken by public school districts and private schools to ensure safe and clean air and water at school facilities; damage to personal property and real property, loss of use and enjoyment of property, and expenses of future medical monitoring.

165. As a result of the private nuisance, the Representative Student Plaintiffs and Student Class Members were harmed, including but not limited to, suffering physical and emotional injuries, increased risk of disease, and expenses of future medical monitoring.

166. Defendants' conduct averred herein constitutes willful and wanton conduct, and actual malice, and shows a conscious disregard of the rights and safety of other persons (including the Representative Plaintiffs and class members) that has a great probability of causing substantial harm. Punitive damages are warranted.

COUNT IV Public Nuisance

167. Plaintiffs incorporate all preceding paragraphs as if fully set forth herein.

168. Pursuant to Restatement (Second) of Torts, §821B:

- (1) A public nuisance is an unreasonable interference with a right common to the general public.
- (2) Circumstances that may sustain a holding that an interference with a public right is unreasonable include the following:

- (a) Whether the conduct involves a significant interference with the public health, the public safety, the public peace, the public comfort or the public convenience; or,
- (b) whether the conduct is proscribed by a statute, ordinance or administrative regulation; or,
- (c) whether the conduct is of a continuing nature or has produced a permanent or long-lasting effect, and, as the actor knows or has reason to know, has a significant effect upon the public right.

169. Pursuant to Restatement (Second) of Torts, §821C:

- (1) In order to recover damages in an individual action for a public nuisance, one must have suffered harm of a kind different from that suffered by other members of the public exercising the right common to the general public that was the subject of interference.
- (2) In order to maintain a proceeding to enjoin to abate a public nuisance, one must:
 - (a) have the right to recover damages, as indicated in Subsection (1); or,
 - (b) have authority as a public official or public agency to represent the state or a political subdivision in the matter; or,
 - (c) have standing to sue as a representative of the general public, as a citizen in a citizen's action.

170. The derailment and subsequent release of toxic, hazardous, and dangerous chemicals and materials resulted in a public nuisance.

171. The release and spread of these chemicals and materials was an unreasonable and significant interference with rights common to the general public, including public health, public safety, public peace, public comfort, public convenience, and the right to clean public water and fresh air in public spaces, including in public school facilities.

172. The release and spread of these chemicals and materials has produced a permanent and long-lasting effect.

173. This public nuisance also interfered with the Representative Plaintiffs' and class members' rights to use and enjoy the public-school property.

174. This was a significant harm, involving more than slight inconvenience.

175. This harm was of greater magnitude and of a different kind than that which the general public suffered.

176. This invasion was the direct and proximate result of the Defendants' (1) negligent conduct, or (2), intentional, reckless conduct, and/or abnormally dangerous activities and/or conditions.

177. As a result of this public nuisance, the Representative School District Plaintiffs and School District Class members have been harmed, including but not limited to medical and health issues for their students and staff; testing and monitoring the impact on their property and water sources; monetary expenses relating to evacuation and/or cleanup of their property and/or drinking water; monetary expenses related to remedial measures taken by public school districts and private schools to ensure safe and clean air and water at school facilities; damage to personal property and real property, loss of use and enjoyment of property, and expenses of future medical monitoring.

178. As a result of this public nuisance, the Representative Student Plaintiffs and Student Class Members were harmed, including but not limited to, suffering physical and emotional injuries, increased risk of disease, and expenses of future medical monitoring.

179. Defendants' conduct averred herein constitutes willful and wanton conduct, and actual malice, and shows a conscious disregard of the rights and safety of other persons (including the Representative Plaintiff and class members) that has a great probability of causing substantial harm. Punitive damages are warranted.

COUNT V
Future Health Monitoring

180. Plaintiffs incorporate all preceding paragraphs as if fully set forth herein.

181. The subject derailment and “controlled” explosion and burn, which are a result of the Defendants’ negligence as set forth in this Complaint, resulted in the release of proven hazardous substances into the surrounding air, surface soil, surface water, and groundwater, which Plaintiffs believe and aver contaminated the facilities and property of the Representative School District Plaintiffs and the School District Class Members.

182. These substances include but are not limited to Vinyl Chloride, Phosgene, Hydrogen Chloride, Dipropylene Glycol, Diethylene Glycol, Ethylene Glycol Monbutyl Ether, Polyvinyl, Polypropyl Glycol, Isobutylene, Butyl Acrylates, Petro Oil, and Benzene.

183. As a result, Representative Student Plaintiffs and Student Class Members were exposed to greater-than-normal background levels of these chemicals and materials.

184. As a proximate result of these exposures, the Representative School District Plaintiffs’ and class members’ students have a significantly increased risk of contracting one or more serious latent diseases and/or respiratory diseases.

185. Monitoring procedures exist that make the early detection of these serious latent diseases possible.

186. These monitoring regimes are different than those normally recommended in the absence of such exposures.

187. These monitoring regimes are reasonably necessary to protect the Representative School District Plaintiffs’ and School District Class Members’ students according to contemporary scientific principles.

188. The Representative Plaintiffs request that the Court establish a medical monitoring program, managed by court-appointed and court-supervised trustees (which Plaintiffs request be the members of the School District Class, each supervising the medical monitoring of the from their respective district), whereby the Representative School District Plaintiffs' and School District Class Members' students will be monitored by physicians, and the medical data produced utilized for epidemiological or other scientific studies.

189. Establishing a Court-supervised, School District managed, medical monitoring program will ensure that funds are reserved, available, and used for medical monitoring, scientific studies, and related activities, the details of which are to be determined by the Court after being advised by experts the Court deems appropriate.

190. Alternatively, the Representative Plaintiffs and Class Members should be awarded the quantifiable costs of such a monitoring program for the Representative Plaintiffs and class members to undertake.

191. Defendants' conduct averred herein constitutes willful and wanton conduct, and actual malice, and shows a conscious disregard of the rights and safety of other persons (including the Representative Plaintiffs and class members) that has a great probability of causing substantial harm. Punitive damages are warranted

COUNT VI

Trespass

192. Plaintiffs incorporate the preceding paragraphs as if fully set forth herein.

193. As a result of the train derailment and of the Norfolk Defendants' explosion and burn, chemicals, materials, and byproducts have invaded and continue to invade the Representative School District Plaintiffs' and School District Class Members' property, and have interfered with their possession, use, and enjoyment of their property.

194. These actions constitute a trespass, including a continuing trespass, on their property.

195. As a direct and proximate result of this trespass, the Representative Plaintiffs and class members have been harmed, past, present and future, including but not limited to the contamination of school properties (personal property and real property) and water sources; medical and health issues for students and staff relating to contamination of school properties and exposure to same; testing and monitoring the impact on school properties and water sources; remediation of school properties and water sources; remedial measures to ensure safe and clean air and water at school properties; loss of use and enjoyment of school properties; increased risk of disease, and expenses of future medical monitoring relating to contamination of school properties and exposure to same.

196. Defendants' conduct averred herein constitutes willful and wanton conduct, and actual malice, and shows a conscious disregard of the rights and safety of other persons (including the Representative Plaintiffs and class members) that has a great probability of causing substantial harm. Punitive damages are warranted.

WHEREFORE, Plaintiffs request that this Honorable Court:

- A. Award compensatory damages for the injuries suffered, as permitted by law;
- B. Award punitive damages, as permitted by law;
- C. Award attorneys' fees, costs, and expenses, as permitted by law;
- D. Interest on all amounts awarded, as permitted by law;
- E. Equitable, injunctive and declaratory relief, including future medical monitoring of students and staff, as permitted by law;
- F. Any other relief that this Honorable Court deems just and proper, as permitted by law or equity.

DEMAND FOR TRIAL BY JURY

Plaintiffs respectfully demand a trial by jury on all jury triable issues.

Respectfully Submitted,
SHENKAN INJURY LAWYERS, LLC.

By: /s/ Richard Shenkan

Richard Shenkan

Pa. I.D. No. 79800

P.O. Box 7125

New Castle, PA 16107

rshenkan@shenkanlaw.com

T: (412) 716-5800

**DILLON, McCANDLESS, KING
COULTER & GRAHAM, L.L.P.**

By: /s/ Thomas W. King, III

PA I.D. No. 21580

128 West Cunningham St.

Butler, PA 16001

tking@dmkcg.com

T: (724) 283-2200

FRANTZ LAW GROUP, APLC

By: /s/ James Frantz

James Frantz (Pro Hac Vice)

JPF@frantzlawgroup.com

William Shinoff (Pro Hac Vice)

wshinoff@frantzlawgroup.com

Regina Bagdasarian (Pro Hac Vice)

regina@frantzlawgroup.com

402 West Broadway, Suite 860

San Diego, CA 92101

T: (619) 233-5945

Attorneys for Plaintiff

CERTIFICATE OF SERVICE

I certify that a copy of the foregoing has been sent, as filed, to all counsel of record through the Court's ECF system, which all counsel of record subscribes to.

SHENKAN INJURY LAWYERS, LLC.

/s/ Richard Shenkan

Richard Shenkan

Exhibit 1



U.S. Department of Transportation

Federal Railroad Administration

FRA AUDIT REPORT

Norfolk Southern Railway Company

(NS) Class I

FRA Audit Number: 2022-NS Special Audit- 01-1

Report Date: July 8, 2022

FRA Audit Leadership:

Karl Alexy	Associate Administrator for Railroad Safety/Chief Safety Officer
Carolyn Hayward-Williams	Director, Office of Railroad Systems and Technology
Charles King	Director, Office of Railroad Infrastructure and Mechanical
Mike Long	Director, Office of Regional Operations and Outreach
Mark Patterson	Director, Office of Data Analysis and Program Support

Preface

The Federal Railroad Administration (FRA) is statutorily authorized to conduct inspections and investigations and issue reports concerning railroad operations but is not solely an auditing organization. Therefore, this performance audit does not strictly adhere to generally accepted government auditing standards. However, this performance audit was planned and performed to meet the stated audit objectives, obtain sufficient and appropriate evidence, and to provide a reasonable basis for the stated findings and conclusions.

Executive Summary

FRA is conducting systemwide special audits of railroads as part of its oversight obligations. In the second half of 2021, Norfolk Southern Railway Company (NS) had three unfortunate amputation accidents, and a year over year increase of 4.7% in total train accidents per million train miles.

Although employee injuries have decreased by 23% at NS and mainline accidents have decreased by 16%, several serious accidents and incidents did occur in 2021, including five involving conductor/brakemen who suffered amputations and other serious injuries between March and October 2021, alone. In contrast, NS experienced 3 such accidents in the entirety of 2020, and none in 2019. Two of the 2021 accidents involved conductors who had less than one year of service and occurred within one week of each other in October 2021. Then-Acting Administrator Bose sent NS a letter on October 28, 2021, highlighting the above accidents and incidents and noting FRA's concerns regarding deficiencies in the NS conductor certification training program submission. NS replied to that letter on November 8, 2021.

FRA conducted a system-wide, special audit of NS from January through early May 2022. During this special audit, FRA focused on seven discipline areas: Critical Incident Stress Plans, Hazardous Materials, Safety Partnerships, Motive Power & Equipment, Operating Practices, Signal & Train Control, and Track. Inspectors from each discipline conducted field work at times and locations determined by relevant characteristics of NS operations and were not present on NS property

constantly throughout the audit period. FRA's audit showed that in many aspects, NS programs are largely effective and compliant with relevant safety regulations. Still, NS has many opportunities to improve employee and manager awareness of and compliance with both FRA safety regulations and NS safety programs.

FRA provided NS an opportunity to review and comment on this audit report; NS provided comments on July 22, 2022. Where NS identified factual errors or additional information, FRA revised the text. Other comments are summarized and responded to where appropriate throughout the report.

Significant Findings

Of the seven discipline areas reviewed, FRA observed the most significant issues with the *Operating Practices* discipline. FRA observed inconsistencies in NS's operational testing and inspection program, ranging from access to and accuracy of records, to the methods and processes used to prioritize the testing of rules that prevent accidents. The failure to properly administer and implement the program of operational testing can diminish the capacity to correct accident/incident and injury trends. Furthermore, the recordkeeping system should not allow testing officers to record numbers of tests that cannot be verified. Without a properly administered program, NS could be hindered in monitoring conditions on the railroad or targeting resources successfully. FRA has met with NS management to discuss the findings that were brought to light during this audit and will follow up with NS through an audit of their program.

For *Critical Incident Stress Plans* (CISP), FRA found that most NS employees and managers are generally not aware of either the regulation or the NS CISP. As a result of managers' ignorance of NS' CISP provisions, they are unable to consistently provide the support to directly involved employees after a critical incident required under 49 CFR § 272.101. Delay in the provision of required relief and services could exacerbate symptoms of distress following a critical incident.

FRA's *Safety Partnerships Division* identified four findings, with the most significant being that NS did not provide a digital or hardcopy document of the tasks and related steps associated with

on-the-job training (OJT) exercises for its new-hire conductor employees. The failure to do so leaves conductor new hires without a reference for the steps necessary to adequately perform their OJT exercises.

FRA's *Motive Power and Equipment Division* found inadequate communication between the NS transportation and mechanical departments. The NS transportation department performed the required equipment inspections, but in certain cases either the defective conditions identified were not reported to the mechanical department for repair or the equipment was not removed from service until repairs could be made. This inadequate communication could expose crews to increased personal injury hazards and may raise the overall risk of train derailment.

FRA's *Hazardous Materials Division* noted that at several locations and dates during the audit, NS trains were observed with missing placards departing where a rail car containing a load or residue of a hazardous material was accepted or where that rail car was placed into a train.

Specifically, FRA observed nine defects and recommended four violations of 49 CFR § 174.9, and 41 defects of which one was recommended for violation of 49 CFR § 174.59. In these cases, NS employees failed to inspect rail cars containing a load/residue of a hazardous material at ground level for missing placards or failed to place or replace missing placards. In the event of an emergency, responders rely on the information on a placard to determine the proper response to a release of the hazardous material in question. Failure to provide this information by marking cars with appropriate placards could exacerbate the risks associated with the release to emergency responders, train crews, and members of the public.

FRA's *Signal, Train Control, and Crossings (S&TC) Division* found instances where NS had not updated numerous circuit plans in a timely fashion. In several locations near St. Louis, significant changes were made at one or more highway rail grade crossings (HRGCs), but the circuit plans had not been updated to show these changes. As a result of the failure to timely update the circuit plans, employees did not have current, accurate information, increasing the likelihood that they might put in place changes that could degrade the safe operation of the crossing warning system.

FRA's *Track Division* determined that there are deficiencies in the current NS Continuous Welded Rail (CWR) plan. Therefore, FRA is formally requesting a full review of the current CWR Plan.

This is based upon the appearance of inconsistent application of CWR procedures among NS workforces, and NS CWR records that do not all match the rail marking information in the field.

Audit Findings/Results by Discipline

Operating Practices

The objective of FRA's Operating Practices (OP) Division audit was to review NS's compliance with 49 CFR § 217.9, Program of Operational Tests and Inspections; Recordkeeping. That regulation requires that each applicable railroad must periodically conduct operational tests and inspections to determine the extent of compliance with its code of operating rules, timetables, and timetable special instructions, specifically including tests and inspections sufficient to verify compliance with the requirements of 49 CFR part 218, subpart F, in accordance with a written program. In particular, FRA's OP audit focused on the qualifications of the railroad testing officers, administration of the program, and recordkeeping.

During the week of April 18-22, 2022, FRA conducted an audit of four-yard locations: Enola/Harrisburg, PA, Atlanta and Macon, GA, and Bellevue, OH. These four locations were chosen because, in calendar year (CY) 2021, these operations were responsible for 15% of NS reportable human factor caused accidents and incidents.

Overall, FRA observed some inconsistencies in NS's operational testing and inspection program, ranging from access to and accuracy of records, to the methods and processes used to prioritize the testing of rules that prevent accidents. The failure to properly administer and implement the program of operational testing can diminish the capacity to correct accident/incident and injury trends. Furthermore, the recordkeeping system should not allow testing officers to record numbers of tests that cannot be verified.

Without a properly administered program, NS could be hindered in monitoring conditions on the railroad or targeting resources successfully. FRA has met with NS management to discuss the findings that were brought to light during this audit.

FRA notes that some encouraging and progressive measures already discussed are moving in a positive direction, and FRA is looking forward to the implementation of all the changes described. Additionally, FRA will initiate a proactive approach with a systemwide audit and, as part of the audit, verify the identified issues are addressed.

Finding 1: Qualifications of the Railroad Testing Officers Is Difficult to Validate.

FRA requires that each railroad officer who conducts operational tests and inspections (railroad testing officer) must meet certain qualifications and that the railroad retain records documenting those qualifications. For example, FRA requires that each railroad testing officer be qualified on the railroad's operating rules, be qualified on the operational testing and inspection program requirements and procedures relevant to the testing and inspections the officer will conduct, and receive appropriate field training, as necessary to achieve proficiency, on each operational test or inspection that the officer is authorized to conduct. 49 CFR § 217.9(b)(1)(i)-(iii). FRA requested a select number of records to review. The number of records provided were limited, and FRA observed that although NS stated that the records did exist, the records are not "centralized", impeding NS's ability to extract records. NS acknowledged this was problematic and are currently consolidating records to one location for sustainable access and management standards.

Finding 2: Program Administration: NS Cannot Verify the Types of Tests Administered, NS Failed to Identify/Test for a Significant Safety Issue, and FRA Observed Officers' Inaccurate Recording of Test Failures.

FRA requires that each railroad have a written program of operational tests and inspections under the various operating conditions on the railroad, and that the program address, with particular emphasis, those operating rules that cause or are likely to cause the most accidents or incidents as identified in mandated periodic reviews of the program. 49 CFR § 217.9(c). Further, FRA regulations requires the railroad testing officers to conduct operational tests and inspections per the railroad's operational tests and inspections program. 49 CFR § 217.9(b)(1)(iv).

FRA reviewed the NS program titled "RP-1 Supervisors Guidelines for Conducting Efficiency Checks" and the railroad's records to determine whether railroad testing officers were placing particular emphasis on those operating rules that cause or are likely to cause the most accidents or

incidents as identified in mandated periodic reviews of the program. FRA found that the NS program relies on a “scenario” based system from which a wide range of operating rules and tests can be chosen. RP-1 at 14-39. However, observing or testing for every rule listed in a scenario is not feasible. NS does not have procedures to know which rules were observed or which test or tests were performed. For example, the “EQUIPMENT OPERATION, HANDLING & INSPECTION” test includes 49 potential rules an officer can test for. NS could not explain or establish whether its railroad testing officers were placing particular emphasis on those operating rules that cause or are likely to cause the most accidents or incidents.

FRA also noted that the NS RP-1 program is unclear how each type of test or inspection is to be conducted. NS could not submit other documents or training materials that illustrate that each testing officer understands how to achieve proficiency in administering tests and inspections.

Finding 3: Failure to Identify and Test for Rules that Prevent Accidents Related to By-Passed Couplers.

Further to Finding 2 and related to compliance to 49 CFR § 217.9(c), FRA observed that NS did not conduct operational test at either Bellevue, OH, or Macon, GA to address human factor caused train accident prevention, specifically accidents related to by-passed couplers. Those two locations, however, account for 22% of NS system by-passed coupler accidents. No operational testing was recorded in either location related to the specific actions that resulted in by-passed coupler accidents. At Bellevue, OH, FRA was informed that testing for by-passed couplers was not required and therefore, not performed. Further the railroad’s quarterly reviews of safety issues failed to acknowledge the growing trend for by-passed couplers at any location until the 1st Quarter 2022 review.

In its comments to the FRA, NS contended that “the increase in by-passed coupler incidents is not entirely attributable to rule compliance,” and indicated that they will continue to engage with FRA in discussing the issue. FRA notes in response that NS revised the operating conditions at Bellevue, OH, and Macon, GA, in July and August of 2022, and looks forward to working with NS to ensure that human factor accidents attributable to by-passed couplers are appropriately addressed.

Finding 4: Undercounting and inadequately observing rules failures.

FRA's audit of railroad testing officers suggests they were undercounting and inadequately observing rules failures. The following are some examples of FRA's on-site audit observations:

- a. At the audit locations, NS recorded the aggregate failure rate prior to the audit at 3.26%, and during the audit, the failure rate rose to 10.1%, a 210% difference. At the audit locations, the overall failure rate for testing observations made by NS supervisors unaccompanied by FRA inspectors differed significantly from when accompanied by FRA inspectors. The observations made by FRA conducting 217T (Observation of Railroad Testing Officers) inspection activity with railroad officers found 23 exceptions, which suggests that the failures due to rules non-compliance are underreported by the railroad. The failure rate when FRA accompanied railroad testing officers was 3.6%. In contrast, NS failure rate for railroad testing officers unaccompanied by FRA inspectors during the 4th Quarter of CY 2021 was 0.13%.
- b. FRA observed 13 of 29 testing officers, i.e., 45%, to have either recorded observed rule failures improperly or failed to record them
- c. NS supervisors failed to correctly report seven testing exceptions into the NS recordkeeping program for crewmembers who were observed not following the operating or safety rules. The failure to record test failures calls into question the accuracy of NS recordkeeping when not under FRA observation. FRA found NS only recorded 39 test failures at the four locations where FRA made its observations over the 4th quarter of CY 2021.

NS commented that this issue might have been related to the fact that their process at the time of the audit included supervisors providing informal corrections to employees regarding rule violations without recording those interactions; they are accordingly effecting a change to what is documented in order to capture the informal interactions. FRA believes that the lack of documentation for non-formal handling of violations presents a missed opportunity to document non-compliance and identify safety trends and looks forward to NS collecting more complete data and using it effectively.

A further example was observed in Atlanta and Macon, GA, where FRA found two violations. One was for having bottled air on a cut of cars and having an instruction stating it was allowed - § 232.103(n)(2). The other violation was for leaving a locomotive in the foul - § 218.101(b). The fact that the instruction bulletin, which had the effect of directing both regulatory and NS rules noncompliance was issued and left uncontested by railroad testing officers.

Finding 5: Number of Tests and Times of Tests Cannot Be Verified.

FRA requires that each railroad keep a record of the date, time, place, and result of each operational test and inspection that was performed in accordance with its program. Each record shall specify the officer administering the test and inspection and each employee tested. 49 CFR§ 217.9(d).

FRA's audit of NS operational testing and inspection procedures and recordkeeping system identified inconsistencies and potential for errors. The number of tests recorded at the subject locations appeared elevated. For example, during the 4th Quarter of CY 2021, NS reported nearly 36,000 observation tests at the four-yard locations audited. The testing volume was so great that some officers recorded more than 1,000 tests in the quarter. For instance, one officer recorded just shy of 2,000 tests in the quarter—a concerning number considering there are 92 days in a quarter, and that would mean that the officer was averaging approximately 22 tests every day if the officer worked every day of the quarter.

NS does not record the exact time a test is performed, although NS does record an observation period. It was observed that this observation period can last several minutes to 18 hours. Therefore, NS cannot verify that it performed rules testing at times that address the most common incident trends.

NS noted there is no right or wrong number of tests, and that they plan to engage in further discussions with FRA on this matter. FRA is working with NS to ensure that testing is conducted in a way to achieve and maintain a safe work environment.

Recommendations:

- 1. Ensure railroad testing officers understand all requirements of the Operational Testing and Inspections program and maintain accurate records of qualifications.**
- 2. Ensure and amend, where necessary, the Operational Testing and Inspections program to ensure compliance with all requirements of 49 CFR Part 217, including both the administration of the program, recordkeeping requirements and the requirement that operational testing and inspections prioritize rules that prevent accidents.**
- 3. Ensure that testing officers understand procedures for administering and recording tests.**

Critical Incident Stress Plans (CISP)

The objectives of the Critical Incident Stress Plan (CISP), 49 CFR Part 272 audit were to determine if NS management and labor understand: (1) the requirements of the NS Part 272 CISP; (2) what is considered a critical incident under the regulation; (3) how to offer (management) and where to obtain (labor) post-incident resources and assistance; and (4) where to obtain a copy of the NS CISP. This portion of the audit is focused on the effectiveness of the NS CISP as currently implemented.

Finding 1: NS management and employees generally lack awareness of the NS CISP.

FRA interviewed 10 NS managers and about 60 employees. Interviews with NS managers, covered employees, and union representatives revealed a general lack of knowledge regarding: (1) the plan requirements under Part 272; (2) the definition of which employees are covered under Part 272; (3) what relief options are available to a covered employee after a critical incident; and (4) what support services are available to covered employees after a critical incident. Interviews revealed that some managers are following the spirit of the Part 272 regulation because it is “the right thing to do” and they are committed to ensuring employees are “taken care of” after a critical incident. However, they are apparently doing so without knowledge of regulatory requirements or the NS CISP plan; none of the interviewees were aware of or had attended any associated training. As a result, whether an employee is offered relief and access to appropriate support services after a critical incident may depend on what individual managers feel is appropriate.

In addition, employees expressed concerns that not only were they unaware of the provisions in Part 272 or that they would be considered covered employees under the NS CISP, but also that they were not provided access to timely relief after a critical incident, additional relief as necessary, or access to support services – even when requested. By delaying or failing to provide early access to support services for employees involved in critical incidents, there is an increased likelihood that those employees could experience worsening symptoms of distress following a critical incident, including potentially developing acute stress disorder or even post-traumatic

stress disorder (PTSD).¹

Recommendations:

- **Ensure covered employees understand NS CISP program requirements, what to expect from the program following a critical incident, and what relief options are available after a critical incident.**
- **Develop and implement a program to increase awareness across the NS system regarding Part 272 requirements and the NS CISP plan.**
- **Ensure that managers comply with the requirements of the NS CISP.**
- **Create a training program for managers:**
 - **Include specific sections on Part 272 plan requirements, definitions of key terms including critical incident, directly involved employee, and covered employee, and penalties for non-compliance.**
 - **Include information on how to determine if an incident is a critical incident and what to do if unsure.**
 - **Provide information and examples of the steps that need to happen, according to the NS CISP plan, after a critical incident.**
 - **Provide information on the roles and responsibilities of those involved in a critical incident including not only the managers, dispatchers, and directly involved employees, but also any Peer Support and Employee Assistance Program (EAP) resources.**
 - **Include information on relief options available to covered employees.**

¹ For prevention of PTSD, the U.S. Department of Veterans Affairs recommends assessment and treatment beginning within 30 days of exposure. *See* U.S. Department of Veterans Affairs, VA/DOD Clinical Practice Guideline for the Management of Posttraumatic Stress Disorder and Acute Stress Disorder Version 3.0, 2017. Pp 5-11.

Finding 2: There is currently no system in place to track employee involvement in critical incidents.

Although a tracking system is not a regulatory requirement under Part 272, railroads that have implemented such systems as a best practice have found it provides better outcomes for covered employees and more consistent application of regulatory requirements by managers across their systems. A tracking system would allow managers the ability to review information on the number of previous incidents, how recently the last critical incident in which the employee was involved took place, and basic information (e.g., trespasser fatality, vehicle strike) about previous incidents. Managers and EAP providers could then use that information to help determine if additional time off, after initial relief from duty, might be necessary, and to determine how best to present available after-care options to the employee. In the absence of such a system, unless an individual manager is aware of previous incidents in which a covered employee was involved, managers may approach each incident as an isolated event. This ignores how involvement in previous critical incidents can exacerbate the severity of distress and trauma experienced after subsequent critical incidents and could result in a covered employee not being offered access to the necessary, appropriate after-care options required to assist in recovery after critical incident involvement.

Recommendations:

- **Document the basic information (name, date of incident, type of incident, etc.) for each employee involved in a critical incident regardless of whether that employee sought relief from the remainder of the duty tour or additional assistance.**
- **Document relief options and additional assistance provided for those employees in need of these resources as indicated in Part 272.**
- **Provide EAP personnel with access to information on accidents/incidents reportable under 49 CFR Part 225 so personnel can ensure both NS internal policies and Part 272 requirements are being correctly implemented.**

NS noted that the objectives of the CISP portion of the audit are not requirements under 49 CFR Part 272 and recommended that FRA delete the entire section. FRA's audit, however, was not focused on determining whether NS' plan was compliant with the regulation, but rather to identify whether it is effective. FRA identified specific actions NS could take to improve its program and is therefore leaving the section in place.

Hazardous Materials

The objectives of the Hazardous Materials portion of the audit were to determine NS compliance with 49 CFR Part 172, Subparts H & I; Part 174, Subparts A & B; Special Permits; and OT 55-R.

FRA's Hazardous Materials (HM) Division conducted its audit between April 4 and April 16, 2022, concluding at NS Headquarters in Atlanta, GA. The field inspections encompassed 50 locations throughout 17 States where NS operates. The HM Division reviewed NS compliance history over the past three years and examined the following in its field inspections:

Criteria

- Part 172, Subparts H-Training and I-Safety and Security
- Part 174, Subparts A-General Requirements and B-General Operating Requirements
- Special Permits (SP) e.g., SP 20996 (Distributed Power Unit Buffer Car Relief) SP-20954 (Electronic Train Consist), etc.
- OT-55-R Recommended Railroad Operating Practices for Transportation of Hazardous Materials

Inspection Locations

NS Major Yards – inbound and outbound trains including local trains

NS Interchange Yards – inbound and outbound trains

NS Off Hours – inspectors inspect yards in their local territory outside of normal duty hours

NS Headquarters Security Audit and Closeout – Atlanta, GA

The carrier's compliance history reveals that compliance with 49 CFR § 174.26, which requires train crews to maintain a paper document that accurately reflects the position of hazardous materials shipments within a train and has been the leading non-compliant item on FRA's hazmat

inspection reports for the NS. Adherence to the § 174.26 requirements for maintaining an accurate consist should become less of an issue with the advent of the DOT-SP 21110, allowing the use of electronic train consist information. NS has only implemented the authorized use of the DOT-SP 21110 on its Gulf and Coastal operations divisions. Other divisions are utilizing the tool “only as a means to become familiar with the new system.” Therefore, FRA examined whether NS maintained paper documentation of consists as required on other NS divisions.

NS also has been granted authorization to utilize DOT-SP 20996, which authorizes the placement of most placarded railcars next to an unoccupied (DPU) locomotive for the entire system. As part of the compliance conditions of this SP, securement of these locomotives must be established to prevent occupancy while in use, and this condition was evaluated as part of the HM Division’s activities. FRA observed compliance with these conditions during the audit.

FRA observed compliance with 49 CFR Part 174-Carriage by Rail Subpart A-General requirements section: § 174.14 Movements to be expedited. If railcars containing a hazardous material are not forwarded in a timely manner, delays could cause an undue hardship on the consignee due to material shortages; and in a worst-case scenario, delays could cause injury or death to employees or the general public, or environmental harm due to an unintentional release of hazardous materials that are time sensitive shipments. At locations where FRA made observations regarding this regulation, inspectors found no conditions where rail cars containing a hazardous material had exceeded the regulatory requirements for the dwell time. The carrier in these locations has a procedure in place to identify the dwell time of rail cars containing a hazardous material and implemented that procedure.

Title 49 CFR § 174.63 prohibits transporting portable tanks, Intermodal (IM) portable tanks, Intermediate Bulk Containers (IBCs), Large Packaging, cargo tanks, or multi-unit tank car tanks containing hazardous materials in Container-on-Flat-Car (COFC) or Trailer-on-Flat-Car (TOFC) service without specific permissions. FRA found no instances of noncompliance at observed locations. The carrier in these locations has a procedure in place to identify acceptable packages to be placed on a flat car for rail transportation.

During the carrier audit FRA inspectors only had the opportunity to observe the implementation of

Section III of the Association of American Railroads Circular No. OT-55-R “Recommended Railroad Operating Practices for Transportation of Hazardous Materials.” Section III covers coupling speeds in rail yards. The carrier appeared to implement these recommended practices.

Finding 1: Inconsistent application of the requirement to inspect for and replace missing placards.

Pursuant to the requirements of 49 CFR Part 174-Carriage by Rail Subpart A-General requirements section:

§ 174.9 Safety and security inspection and acceptance

At each location where a hazardous material is accepted for transportation or placed in a train, the carrier must inspect each rail car containing the hazardous material, at ground level, for required markings, labels, placards, securement of closures, and leakage. These inspections may be performed in conjunction with inspections required under parts 215 and 232 of this title.

Pursuant to the requirements of 49 CFR Part 174-Carriage by Rail Subpart C-General handling and loading requirements section:

§ 174.59 Marking and placarding of rail cars

No person may transport a rail car carrying hazardous materials unless it is marked and placarded as required by this subchapter. Placards and car certificates lost in transit must be replaced at the next inspection point, and those not required must be removed at the next terminal where the train is classified. For Canadian shipments, required placards lost in transit, must be replaced either by those required by part 172 of this subchapter <https://www.ecfr.gov/current/title-49/part-172> or by those authorized under § 171.12.

At several locations and dates during the audit, NS trains were observed with missing placards departing either where a rail car containing a load or residue of a hazardous material was accepted or where that rail car was placed into a train. Specifically, FRA observed 9 instances of non-compliance with § 174.9, and has recommended 4 violations for the non-compliance. FRA also

observed 42 instances of non-compliance with § 174.59 and has recommended one violation for the non-compliance. Based on FRA's findings, NS failed to inspect the rail cars containing a load/residue of a hazardous material at ground level for missing placards and take corrective action for the placard defects prior to accepting or allowing the shipments to continue in transportation. In the event of an emergency, responders rely on the information on a placard as one of the sources of information to determine the proper response to a release of the hazardous material in question. An improper response could exacerbate the hazards associated with the release, possibly putting emergency responders, employees, and potentially the public in additional harm's way.

Recommendation: Ensure that rail cars carrying either a load or residue of hazardous material are inspected and are properly placarded prior to departure from the location where they are accepted or placed into trains.

Finding 2: Locations of hazardous materials shipments are sometimes not accurately documented in train consists.

Pursuant to the requirements of 49 CFR Part 174-Carriage by Rail Subpart B-General operating requirements section:

§ 174.26 Notice to train crews

The train crew must have a document that reflects the current position in the train of each rail car containing a hazardous material. The train crew must update the document to indicate changes in the placement of a rail car within the train. For example, the train crew may update the document by handwriting on it or by appending or attaching another document to it.

A member of the crew of a train transporting a hazardous material must have a copy of a document for the hazardous material being transported showing the information required by part 172 of this subchapter, including the requirements in § 172.604(b) applicable to emergency response information.

At multiple locations and dates during this audit, FRA found instances where crews did not have or maintain the accurate position of rail cars containing a hazardous material on their train consist or document identifying the placement of these cars in their train. FRA found 39 instances of non-compliance with the requirements of § 174.26 and have recommended 22 violations for the non-compliance. Based on FRA's findings, the inaccurate documentation of the placement in train of the rail cars containing a hazardous material on a train crews consist or document identifying the placement of these cars in their train is the result of two contributing factors:

- Incorrect information in the carrier's train line-up program, or
- The train crew's failure to update their document after either setting-off or picking-up rail cars during their tour of duty.

In the case of a train derailment, it is vital that either the carrier's personnel or emergency responders have an accurate location of railcars containing hazardous materials in the train. Without accurate information, there is an increased likelihood for person(s) walking the train to come in contact with a breached rail car containing a hazardous material.

Recommendation: Ensure that train crews have and maintain documentation to reflect the location of hazardous materials shipments within the train.

Finding 3: Proper segregation of placarded cars, transport vehicles, freight containers, and bulk packages are sometimes not accurately applied within a train.

Pursuant to the requirements of 49 CFR Part 174-Carriage by Rail Subpart D-Handling of placarded rail cars, transport vehicles and freight containers section:

§ 174.85 Position in train of placarded cars, transport vehicles, freight containers, and bulk packagings

- (a) Except as provided in paragraphs (b) and (c) of this section, the position in a train of each loaded placarded car, transport vehicle, freight container, and bulk packaging must conform to the provisions of this section.

- (b) A car placarded “RADIOACTIVE” must comply with train positioning requirements of paragraph (d) of this section and must be separated from a locomotive, occupied caboose, or carload of undeveloped film by at least one non-placarded car.
- (c) A tank car containing the residue of a hazardous material must be separated from a locomotive or occupied caboose by at least one rail car other than a placarded tank car.

FRA identified two instances of non-compliance with § 174.85 and has recommended one violation for the non-compliance. During the audit, FRA found a train with an unauthorized placarded rail car closer than the sixth car to the occupied locomotive during transportation. The carrier or the train crew failed to place the correct number of authorized rail cars between the placement-restricted rail car containing a hazardous material and the locomotive. In the case of a derailment, if the closest rail car containing a placement-restricted hazardous material is nearer than the sixth car from a locomotive, a release of hazardous material could be more likely to subject the train crew members to harm.

Recommendation: Ensure that hazardous materials shipments are properly segregated within a train in accordance with § 174.85, and that crews ensure segregation compliance is maintained within a train when making changes to the consist.

Finding 4: Compliance with required Operating Controls established in DOT-SP-20996.

Pursuant to the requirements of the Pipeline and Hazardous Materials Safety Administration’s (PHMSA) Special Permit DOT-SP 20996 all train types and railcar types used with “Unoccupied Distributed Power” section:

7. Safety Control Measures

- a. Packaging: All train types and railcar types used with unoccupied distributed power units (UDPs) and dead-in-tow locomotives.
- b. Operational Controls:
 - (1) All locomotives located at the head of the train, or closer than 10 freight cars to an occupied locomotive or occupied rail car, must continue to be subject to the position in train requirements of 49 CFR 174.85.
 - (2) Dead-in-tow locomotives must continue to be subject to the requirements of 49 CFR 229.9.
 - (3) The operating rail carrier must keep a copy of the special permit at its operating headquarters.
 - (4) The operating rail carrier must not deadhead employees on DPUs or dead-in-tow locomotives operating under this special permit.
 - (5) UDPs and dead-in-tow locomotives must be locked to prevent unintended occupancy during operation.
 - (6) UDPs and dead-in-tow locomotives are prohibited from placement next to the following rail cars and must be separated by at least one (1) buffer car:
 - (i) Divisions 1.1 and 1.2.
 - (ii) Division 2.3 (TIH/PIH) tank cars.
 - (iii) Division 6.1, Packing Group I, Zone A tank cars
 - (iv) Class 7 (SNF & HLRW Shipments Only
 - (7) The operating rail carrier must provide operating employees any necessary changes to their hazmat instructions to ensure compliance with the special permit.

During this audit, FRA also inspected for NS's compliance with the requirements of the operating

controls established in DOT-SP-20996. While no defects were observed during the HM Division's conduct of its field audits, FRA does want to bring to NS's attention a compliance issue that occurred during the period of the FRA's NS audit.

Specifically, a HM train placement issue occurred with Train 19MU126 departing westbound from NS Shaffer's Crossing Yard located in Roanoke, VA, to NS Bluefield Yard in Bluefield, WV. Upon arriving at Shaffer's Crossing Yard, the train crew set out the head thirty-seven rail cars between the lead locomotives and the unoccupied DPU locomotive. When completing this switch, the train crew then went back to the remainder of the train, coupling into the DPU locomotive. Locomotive NS 4107 (the designated DPU) was coupled into residue HM tank car CBTX 785064, a residue shipment of UN 1075//Liquefied Petroleum Gas//Class 2.1, located at position #1 in the outbound train. This is in violation of § 174.85, as section 7(b)(1) states that the Special Permit does not alter requirements for locomotives at the head of the train or closer than 10 freight cars to an occupied locomotive.

In the case of a derailment, if the closest rail car containing a placement-restricted hazardous material is nearer than the sixth car from a locomotive, the risk of injury or fatality to train crew members from a breach of the package containing the hazardous material could potentially be increased.

Recommendation: Ensure trains utilizing SP 20996 adhere to all specified operational conditions established in the SP.

Finding 5: Compliance with required Operating Controls established in DOT-SP-21110.

Pursuant to the requirements of PHMSA's Special Permit DOT-SP 21110 that authorizes the use of electronic means to maintain and communicate on-board train consist information in lieu of paper documentation when hazardous materials are transported by rail section:

7. Safety Control Measures

a. Packaging: As required in the HMR, special permit, or approval.

b. Operational Controls:

(1) This permit is limited to specific routes associated with designated routes as described in this application.

(2) The information describing how to conduct operations under this special permit must be included in the grantee's HM-rules.

(3) The following information must be readily available by electronic means to the train crew during operations; and to Federal, State, or local government representatives (e.g., emergency responders) in the event of an accident/incident or inspection/investigation:

(i) Shipping paper information required pursuant to 49 CFR Part 172, Subparts C and G.

(ii) The current position and identification numbers for all rail cars containing hazardous materials.

(4) Any changes to position of railcars in the train consist must be updated electronically, in real-time, as railcars are added or removed from the train.

(5) As soon as practicable, the grantee must transmit updated car position information to Railinc for use in the AskRail application.

(6) The train crew must be provided mobile device(s) containing the following:

(i) Instructions to the train crew on how to provide the information required by paragraph 7.b.(3) above in electronic format to Federal, State, or local government representatives;

(ii) A copy of this special permit; and

- (iii) An electronic document reflecting the current position in the train of each rail car containing a hazardous material.
- (7) More than one method of electronic information exchange must be made available to train crews to ensure redundancy and account for potential mobile device limitations of the requesting authority. Upon initial notification of an incident to the agency having jurisdiction (“AHJ”) a copy of the train consist must be offered to the AHJ.
- (8) One of the selected methods of electronic information exchange must allow for immediate exchange of information to the onsite responders (e.g., transmission between mobile devices).
- (9) In the event electronic communication is unavailable, one of the following communication options must be utilized to communicate to first responders.
 - (i) Conventional land line or facsimile.
 - (ii) An alternative communication method (e.g., land mobile radio communication, satellite phones) to provide up-to-date electronic shipping paper and train placement information.
 - (iii) Providing the mobile device directly to first responders for review and inspection on the mobile device.
- (1) Training must be provided by the grantee for first responders along areas of the route without cellular service on the methods to be taken in an emergency to access the information on the electronic device when communication with an employee from the railroad is not possible.
- (2) Each employee subject to functions covered by this special permit shall be provided training on how to perform these functions by the grantee.

- (3) The grantee must provide notification and instruction on the use of this special permit to the emergency response officials along the right-of-way where the permit is being used.

FRA identified one instance of non-conformance with the requirements of SP 21110. An NS train crew was observed using both a paper consist and an electronic device; neither the paper consist nor the electronic device provided an accurate accounting for the location of rail cars transporting hazardous materials. The electronic device did not have an accurate accounting of the placement of the cars containing hazardous material and the train crew did not update their paper consist to reflect the placement of rail cars containing a hazardous material. In the case of a train derailment, it is vital that either the carrier's personnel or emergency responders have an accurate location of railcars containing hazardous materials in the train. There is increased probability that a person(s) walking the train might encounter a breached rail car containing hazardous material.

Recommendation: Ensure that train crews adhere to the requirements to maintain an accurate placement-in-train document per § 174.26 and SP 21110. If a train crew is utilizing both an electronic document and a paper document, both documents must be maintained to reflect accurate position-in-train information of hazardous materials shipments.

Safety Partnerships

FRA's Safety Partnerships Division conducted a limited scope program review to determine compliance with 49 CFR Part 243 - Training, Qualification, and Oversight for Safety-Related Railroad Employees. Part 243 went into effect on January 1, 2020.

Safety Partnerships commenced its program review activities the week of February 7, 2022, at the NS Training Center in McDonough, GA. Observations of additional classes for signal and mechanical personnel are scheduled for the summer and fall of 2022, as a follow-up to the program review; findings of these follow-up reviews will be discussed onsite with NS training staff. Safety Partnerships observed delivery of a new hire conductor class which consisted of lectures, in class practical exercises, and on-the-job-training (OJT) field exercises. Additional training program content analysis continued up until May 27, 2022. These analyses were conducted at FRA mobile offices, as the data requests of NS were received. FRA focused on several areas, including:

- § 243.101(d)(3), requiring the tasks and related steps associated with OJT exercises for a particular category or subcategory of employee to be maintained together in one manual, checklist, or similar document;
- § 243.109(b), requiring NS to review previously approved programs and modify them accordingly when new safety-related Federal railroad laws, regulations, or orders are issued, or new safety-related technologies, procedures, or equipment are introduced into the workplace and result in new knowledge requirements, safety-related tasks, or modification of existing safety-related duties;
- § 243.201(a)(1), requiring NS to designate its existing safety-related railroad employees by occupational category or subcategory, and to limit performance of each category or subcategory to designated employees, by September 1, 2020;
- § 243.203, establishing requirements for content and accessibility of qualification status records;

- § 243.207, requiring NS to complete its first annual review to determine if knowledge or performance gaps exist in the application of Federal railroad safety laws, regulations, and orders by September 1, 2021; and
- § 243.209, requiring NS to maintain a current list of contractors utilized to perform safety related tasks, excluding those contractors whose employees NS may have trained and qualified.

Finding 1: NS failed to provide a copy of the tasks and related steps associated with OJT exercises to its newly hired conductors.

NS failed to provide new hires with a document (digital or hardcopy) containing all OJT tasks and related steps necessary for demonstrating competency and in an occupational category or subcategory, as required by § 243.101(d)(3). NS managers indicated that they simply overlooked this requirement in the regulation. By failing to provide this information, NS did not ensure that new learners have a clear reference of what is necessary to achieve qualification in their craft.

At the time of the audit, NS did not have OJT checklists available for FRA inspection for any occupational category. FRA notes, however, that NS has since remediated this finding for all occupational categories.

Recommendation: Create and provide the required OJT checklists together in one document (digital or hardcopy), for each new employee prior to beginning OJT exercises.

Finding 2: NS failed to conduct its first annual review by September 1, 2021, to determine if knowledge or performance gaps exist in the application of Federal railroad safety laws, regulations, and orders.

NS failed to conduct an annual review of its various safety data and performance metrics to identify knowledge or performance gaps in occupational categories, to determine whether adjustments to a training component of the program are the appropriate intervention to close those gaps, or to otherwise improve the effectiveness of the program, as required by § 243.207. NS managers indicated that they simply overlooked this requirement in the regulation. Failure to

conduct an annual review of the various data performance metrics reduces the number of continuous improvement opportunities with respect to refresher training development and/or modifying existing training curriculum.

Recommendation: Conduct an annual review of safety data and performance metrics within 30 days of this report.

Finding 3: NS incorrectly reported it did not find the need to modify any of its previously approved training programs.

NS did not modify any of its previously approved training programs, as required by § 243.109(b). NS may have overlooked this requirement in the regulation. Failure to conduct an initial annual review as noted in the previous finding was a contributing factor, due to the absence of qualitative and quantitative data analysis necessary to determine if adjustments in training program curricula were appropriate.

Recommendation: Review all active NS courses relating to Federal laws, regulations, or orders and consider revisions based on data gathered from the annual review.

Finding 4: NS partially failed to record the qualification designation(s) of existing and new employees.

NS did not fully describe the qualification designation(s) for existing and new hire employees as required by §§ 243.201 and 243.203. Designating existing employees under § 243.201 is related to § 243.203, in that the latter relates to keeping records by which a railroad indicates the qualification designation(s) of all its employees. At the time of the audit, the NS Learning Management System (LMS) was utilized to maintain the qualification records required by § 243.203 but was not configured to allow officials to record qualification designation. Failure to fully describe all the qualification designation(s) of NS employees impedes FRA's and the employees' ability to understand which safety-related tasks they are qualified to perform.

Recommendation: Complete all ongoing revisions to the LMS to clearly document the qualification designation(s) of all occupational category and subcategory of NS employees.

Motive Power & Equipment (MP&E)

FRA's *Motive Power & Equipment (MP&E)* portion of the audit contained several objectives concerning the level of compliance by NS with MP&E Regulations, 49 CFR Parts 215, Freight Car Safety Standards, 218, Railroad Operating Practices (Blue Flag Protection), 229, Railroad Locomotive Safety Standards, 231, Railroad Safety Appliance Standards, and 232, Brake System Safety Standards. The primary objective of the audit was to capture the largest part of the locomotive fleet in service and being operated. The second objective was to observe brake tests, daily inspections, mechanical inspections, blue flag protection of mechanical employees and crews designated to perform inspections on freight cars and locomotives. The last objective was to observe and sample the completeness and record retention of Single Car Airbrake Tests (SCABT) in key locations.

The MP&E Division conducted an audit of the NS system that consisted of 16 States and 37 individual locations over a span of 10 days, 24 hours a day.

Of the 37 locations inspected, the top 5 locations by defects were:

- Conway, PA 211 defects of which 17 were recommended for violations.
- Enola, PA 204 defects of which 11 were recommended for violations.
- Macon, GA 198 defects of which 3 were recommended for violations.
- Irondale, AL 176 defects of which 7 were recommended for violations.
- Chattanooga, TN 140 defects of which 2 were recommended for violations.

In total FRA inspected 5,035 freight cars, with 810 of those cars defective for a ratio of 16.1%. FRA inspected 420 locomotives, with 291 locomotives defective for a ratio of 69.3%. Of these cars and locomotives, there were a total of 60 recommendations for violation.

FRA commends NS on the locations where significant compliance was demonstrated. For instance, in Kansas City, MO, 1,029 units were inspected with only 36 defects found, and no violations recommended. Also, in Roanoke, VA, 421 units were inspected with only 16 defects

and no violations recommended.

SCABT were sampled and no exceptions were taken.

Finding 1: FRA found instances where NS did not take immediate actions to remediate defective conditions.

Transportation crews on locomotives typically performed the required inspections of their equipment; however, FRA found instances where defective conditions were not reported to the mechanical department for repair, or the equipment was not removed from service until repairs could be made. These conditions could have exposed crews to increased hazards, potential property damage, and injuries due to defective equipment knowingly left in service. Brake tests and mechanical inspection of freight cars resulted in a defect ratio of 16%. In contrast, locomotive inspections resulted in a 69.3% defect ratio.

Consistent reporting of defective conditions to the mechanical department by the transportation department is a concern

Recommendation: Ensure effective and timely communication between the transportation department and the mechanical department of defective conditions identified by members of the transportation department.

Signal & Train Control

The first objective of the Signal & Train Control (S&TC) portion of the audit was to determine the level of NS compliance with 49 CFR Parts 228, 234, and 236. The second objective was to follow up on NS remedial actions in response to the FRA S&TC Division's NS Dispatch review in 2021. A final objective was to review records and reports to validate:

- a. Positive Train Control (PTC) System Performance to include Reporting (Enforcements, Initialization Failures, Cut-Outs and Malfunctions).*
- b. Configuration Management (New or Updated control plans, Critical Features Verification and Validation (V&V) Process).*
- c. Validation of current Positive Train Control Implementation Plan (PTCIP) and Positive Train Control Safety Plan (PTCSP) documentation.*
- d. PTC Training by disciplines.*

The FRA S&TC Division conducted an audit of the NS system between April 12 and April 22, 2022. This audit consisted of inspections in 12 States and 21 different Districts (the NS term for Subdivision) over a span of 10 days.

FRA found no instances of noncompliance for PTC system performance. The carrier has an effective procedure in place to ensure system performance, reporting, and identify and address potential failures.

During these two weeks, the S&TC Division inspected 640 units and 4,661 sub-units, finding 286 defects of which 42 were recommended as violations. FRA identified several additional defects and violations during this audit not related to the above objectives. The majority of defects and violations discovered during this audit related to issues addressed during the 2021 Signal Dispatch Review. These issues include Hours of Service (HOS) recordkeeping and interference of Maintenance of Way (MoW)/train crews (OP) at HRGCs.

NS is working to correct the HOS recordkeeping program to identify missing information, which comprise many of the FRA defects. This is a continuation of the action plan NS

provided to FRA last year. FRA will continue to monitor this for progress. NS is reaching out to other Class I railroads to see how they have improved their MoW and OP interference issues. This is also a continuation of the remedial action plan NS provided to FRA last year. This issue has improved but remains a concern. FRA will continue to monitor this for progress.

Because those findings were addressed in an earlier report, FRA is not making any related recommendations in this report. The S&TC Division has continued discussions with NS senior management regarding the NS action plan to correct the systemic issues noted above.

Finding 1: FRA found instances where NS did not update certain circuit plans in a timely fashion.

At 30 percent of the locations whose records were inspected by FRA, significant changes were made at one or more Highway Rail Grade Crossings (HRGCs), but the circuit plans had not been updated to show these changes. As a result of the failure to timely update these circuit plans pursuant to 49 CFR § 234.201, employees do not have accurate information, which could increase the likelihood that they could put in place changes that degrade the safe operation of the crossing warning system.

Recommendation: Develop and implement a process for ensuring that changes to warning systems at HRGCs are recorded in applicable circuit plans in a timely fashion.

Track

The objectives of the Track portion of the audit were to determine NS compliance with 49 CFR Parts 213 and 214.

During the two weeks of inspections conducted, FRA's Track Division inspected 13,923 units, documented 4,145 defects, and recommended 30 violations. The majority of FRA's findings are centered on three primary issues, including the NS Continuous Welded Rail (CWR) plan, track special work defects, and increased defect ratios when walking inspections are conducted.

Finding 1: NS CWR activities were not compliant with regulatory requirements.

As part of the Track Division's NS audit, the Rail Integrity Team evaluated the effectiveness of NS rail defect and CWR plan monitoring. This included a review of CWR records in 19 randomly selected NS districts, with randomly selected locations for field follow-up to verify if the records matched the activities in the field.

There are two parts to the CWR findings identified by FRA during this audit. The first part is associated with field identification inspections by the Track Inspectors and Rail Integrity Specialists looking for compliance with the written CWR plan and procedures. In this part, FRA inspected 228 assets and found 134 non-compliant conditions with 125 defects of which 9 of those were recommended for violation. Most non-compliance centered on:

- Rail anchoring or fastening requirements that were not in accordance with the NS CWR plan under defect code 213.119.B;
- Non-compliant rail joint installation and maintenance procedures under defect codes 213.119.C2 and C3; and
- Identified failures to follow procedures to maintain the desired rail installation temperature range during rail plug cut-ins under defect code 213.119.D.

The second component of FRA's CWR findings focuses on compliance with record-keeping and documentation that were field verified through follow-up verification inspections for rail plug cut-

ins. Overall review of CWR activities revealed 532 rail record defects that were identified out of 1,947 rail records sampled by FRA. A review of CWR reporting activities looked at 19 districts/subdivisions and identified 1,805 defects over multiple affiliated documents. The Rail Integrity Team's field verifications uncovered unreliable reporting data, which could demonstrate a lack of CWR follow-up monitoring and potentially inaccurate documentation of work performed. The Team reviewed 13,680 rail/added or removed records (line-items), finding that 2,361 of those records contained an entry stating that zero inches of track were added or removed at a temperature that is outside the 20-degree safe temperature range specified in the NS CWR plan. These records did not show the adjusted rail neutral temperature (RNT) after that work was performed, as required by 49 CFR § 213.119(j)(1). These records indicate that NS is tracking rail that is added and removed without sufficient procedures to control for adjusted rail neutral temperature, which is not in compliance with the requirements of 213.119.D.

There are two additional issues found involving NS CWR plan monitoring. The Rail Integrity Team found a flaw in how NS is recording remedial action taken for FRA classified rail defects. FRA reviewed 2,310 total records (line items) of rail defects identified for repair. Of these, FRA noted that 1,606 were FRA classified rail defects. FRA remedial action codes have a multi-level remediation process with FRA requiring the initial remedial action to be recorded. In 676 of those records, or 42% of the time, the initial reported remedial action code was incorrectly applied.

The second is that NS has provided field personnel with a "Reference Mark Field Guide." This guide is not included in their submitted CWR plan, and FRA has not approved this field guide under § 213.118. In the field guide procedures, the workforce is required to make their reference marks and then write the distance "after the work" has been completed. This is not an approved process for CWR match marks as it is not included in the approved NS CWR Plan. FRA discovered the workforce was not correctly applying the reference marks.

The NS CWR plan does not have sufficient written procedures for calculating the RNT. Instead, the NS CWR plan simply attempts to track the amount of rail that is added or removed from the track. This is not consistent with § 213.119(d) & (f). FRA findings of inconsistent CWR plan application along with omitted procedural documentation, and inaccurate reporting of initial remedial actions, are serious concerns that further compounds the issue of tracking rail

added/removed. A CWR plan is intended to be a complete, stand-alone document that consists of an FRA-approved set of procedures to be used by the engineering work groups (that can be verified by FRA Inspectors) for the proper management of thermal forces induced by the RNT. Making changes to the CWR plan without re-submission to FRA for review is not in compliance with § 213.118 and can lead to improper application of track buckling/pull apart countermeasures, inconsistent rail cut-ins, and improper reporting of corrective actions taken to repair or protect both buckle prone and pull-apart prone conditions.

Summary

There appears to be an inconsistent application of CWR procedures among the NS engineering workforce. For example, in multiple instances NS CWR records did not match the rail marking information in the field.

1. NS is only tracking rail added or removed, and the CWR plan does not provide directions for calculating the RNT after work is performed to assure the RNT has been adjusted to the proper safe range.
2. Initial remedial actions for rail defects are in general not being clearly reported in NS rail records. NS use of letters for codes corresponding to the letters in the 213.113 Remedial Action Table can be unclear and could have multiple meanings for the work performed leading to a number of different actions taken under that one code. Some NS workers reported letter codes which represent actions that are more restrictive than those required in the table but are not the required action for defects of that nature. Because of this imprecise coding system, the workforce did not select the correct code 42% of the time.

According to NS, the CWR policy submitted in January 2021 is consistent with the regulation as written and addresses issues cited during the FRA System Audit. They assert that acceptance of NS's plan as submitted would resolve the exceptions cited in this report. FRA disagrees and will discuss the matter further with NS during the upcoming plan review process.

Recommendations:**Resubmit a revised CWR plan for FRA approval that:**

- **Includes proper reporting requirements for rail plug cut-ins that establishes control and proper monitoring by NS management for the proper adjustment of RNT in accordance with §§ 213.118 & 119.**
- **Includes written procedures which address: the installation, adjustment, maintenance, and inspection of CWR; inspection of CWR joints; and an updated training program for the application of those procedures.**
- **Retrain § 213.7(c) personnel who are qualified to inspect CWR or supervise the installation, adjustment, and maintenance of CWR track in the proper FRA reporting requirements for initial remedial action for rail record retention.**
- **Clearly define initial remedial actions associated with field activities taken to replace, repair, or protect defective rails listed in accordance with the table of § 213.113(c).**

Finding 2: The NS program for maintaining Main Track and Yard Track Switches (turnouts) could be improved.

For the most part, main line track on the NS system is well maintained. However, FRA took exceptions for loose, worn, and missing fastening components in turnouts. FRA inspection of turnouts looks at the overall component effectiveness, including general fasteners, switch and rail components, and the crossing or turnout frogs as a system for the safe transition from one track to another track. All components of the turnout play a vital role in this critical area of the track structure for safe train movement. Of the 2,821 turnouts on main track, 1,204 defects were identified with 9 of those defects being recommended for violation, resulting in a defect ratio of 43%. Of the 2,665 turnouts in yard track, 1,582 defects were identified with none of those defects recommended for violation at this time, but did result in a defect ratio of 59%.

For main track and yard track turnouts the table below shows the most common identified turnout defects.

Part	Code	Description	Defect count	Rec. Violation
213	119.B	Failure to comply with written CWR procedures	95	9
213	133.A12	Loose, worn or missing frog bolts	401	
213	133.A13	Loose, worn or missing guard rail bolts	163	
213	133.A14	Loose, worn or missing guard rail clamps/wedges or other components	102	
213	133.A15	Other turnout or crossing fastenings not intact or maintained	152	
213	135.D	Heel of switch insecure	350	
213	137.A	Insufficient flangeway depth	32	
213	137.C	Tread portion of frog worn in excess of allowable	46	
213	137.F	Severe frog condition not otherwise provided	133	
213	141.A	Raised guard worn excessively	11	
213	143.A1	Guard check gage less than allowable	83	5

FRA conducted a random sample of FRA inspection reports of NS trackage to provide additional insight into which component defects were identified with the greatest frequency.

Highest Frequency Component Defects

Main Defects	Counts	Yard Defect	Counts
119.B	17	133.A12	41
133.A9	11	135.D	35
133.A12	9		
133.A15	30		
135.D	5		
137.F	4		

The above tables highlight that 213.119.B (*Failure to comply with written CWR procedures – anchoring or fastening*) defects should be addressed along with critical turnout components that were found loose and not maintained. This is particularly true of loose, worn, and missing frog bolts and insecure heel blocks. Turnout component defects identified on the main track during the audit yielded a defect ratio above the national average of 24%.

Turnouts play a critical function that turnouts in the safety of the track structure. When critical components are not maintained, there is an increased risk of sudden failure with catastrophic potential. Data obtained from FRA’s Safety Data Site shows derailments that, between January 2017 and March of 2022, NS had 83 derailments associated with turnouts. This totaled \$8,136,313 in report damages. Of these, 16 derailments occurred on the mainline, totaling \$5,118,395 in damages.

Summary

- Main track turnout components accounted for 29% of all defects.

- Yard track turnout components accounted for 38% of all defects.
- Improved identification and maintenance of Frog bolts, insecure heel blocks, loose fasteners, overall frog conditions, and adjacent guard rails is necessary.

Recommendations:

Develop and implement an approach to address defects in turnout areas that:

- **Improves oversight of track inspection reporting in critical component areas of turnouts.**
- **Improves support for follow-up maintenance activities once component issues are identified with a focus on quality repairs.**
- **Addresses severely deficient frog conditions.**

Finding 3: The NS track inspection program could be improved with increased walking inspections.

In both the main tracks and yard tracks there is an increase in identified track conditions related to special work defects when walking inspections were conducted. This is especially true for joint bars, where 85 defects were identified under defect code 213.121.E (*Less than 2 bolts per rail at any joint in continuous welded rail*) and 95 defects were identified under defect code 213.121.F (*Loose joint bars (joint rail)*). These accounted for 180 defective joint bar conditions, and there was a total of 307 defects (7%) in the category of joint bar defects identified during the audit. If joint bars are not maintained, they can fail suddenly; derailments associated with failed joint bars are usually associated with high reported damage costs.

This is supported by data obtained from FRA's Safety Data Site that shows derailments between January 2017 and March of 2022. For all types of derailments associated with joint bars, NS had a total 8 derailments that totaled \$2,305,726 in damages. Of these, 4 were main line derailments totaling \$2,115,123 in damages.

Summary

- Walking inspections are more effective at finding certain types of defects.

In its comments, NS noted that they comply with the regulatory walking inspection requirements. In this instance, FRA is noting that NS has an opportunity to increase the effectiveness of their track inspection program.

Recommendations:

- **Increase periodic walking inspection in main tracks at joints at ends of curves and CWR rail cut-ins.**
- **Increase periodic walking inspection in yards for improved joint bar defect identification.**

Conclusion

FRA provided NS with a draft copy of this report in July 2022. NS reviewed the report and provided comments. Where NS provided factual corrections or requested clarifying edits to the text, FRA has revised its report. Other comments are summarized in the relevant sections, and FRA has included brief responses.

FRA's audit illustrated that in many aspects, NS programs are largely effective and compliant with relevant safety regulations. Still, NS has many opportunities to improve employee and manager awareness of and compliance with both FRA safety regulations and NS safety programs. With more effective use of training, improved management oversight, or even innovative applications of technology, NS can better prevent property damage, loss of life, or catastrophic damage to communities by ensuring its personnel have all of the knowledge and tools they need to maximize railroad safety.

Exhibit 2

Related Investigations

- [Norfolk Southern Railway Train Derailment with Subsequent Hazardous Material Release and Fires](#)



NTSB Issues Investigative Update on Ohio Train Derailment

2/14/2023

WASHINGTON (Feb. 14, 2023) — The NTSB investigation of the Feb. 3 Norfolk Southern freight train derailment in East Palestine, Ohio is ongoing.

On Feb. 3, at approximately 8:54 p.m., local time, eastbound Norfolk Southern Railway, general merchandise freight train 32N, derailed on main track 1 in East Palestine, Ohio. As a result of the derailment, 38 rail cars derailed and a fire ensued which damaged an additional 12 cars. There were 20 total hazardous material cars in the train consist—11 of which derailed. A list of what the derailed rail cars were carrying is available [online](#). There were no reported fatalities or injuries.

NTSB is conducting a safety investigation to determine the probable cause of the derailment and issue any safety recommendations, if necessary, to prevent future derailments. The NTSB can also issue urgent recommendations at any point during the investigation. All questions regarding the safety investigation should go to NTSB. While emergency response will be a factor in the investigation, NTSB is not involved in air monitoring, testing of water quality, environmental remediation or the evacuation orders. Questions on environmental issues should be referred to the Environmental Protection Agency. Learn more: [East Palestine Train Derailment - EPA OSC Response](#).

Parties to the NTSB investigation provide technical assistance. They include: U.S. Department of Transportation's Pipeline and Hazardous Materials Safety Administration and Federal Railroad Administration, Ohio State Highway Patrol, the Village of East Palestine, Norfolk Southern Railway, Trinity Industries Leasing Company, GATX Corporation, Brotherhood of Railway Carmen, International Association of Sheet Metal, Air, Rail and Transportation Workers and Brotherhood of Locomotive Engineers and Trainmen.

NTSB continues to work with the investigative parties to determine what exactly caused the derailment and to evaluate the emergency response efforts.

NTSB investigators have identified and examined the rail car that initiated the derailment. Surveillance video from a residence showed what appears to be a wheel bearing in the final stage of overheating moments before the derailment. The wheelset from the suspected railcar has been collected as evidence for metallurgical examination. The suspected overheated wheel bearing has been collected and will be examined by engineers from the NTSB Materials Laboratory in Washington, D.C.

The tank cars are currently being decontaminated. Once the process is complete, NTSB investigators will return to Ohio to complete a thorough examination of the tank cars.

The vinyl chloride tank car top fittings, including the relief valves, were removed and secured in a locked intermodal container pending an NTSB examination. Once the fittings are examined by NTSB investigators, they will be shipped to Texas for testing, which will be conducted under the direction of the NTSB.

NTSB has obtained locomotive event recorder data, forward- and inward-facing image recording data and wayside defect detector data. NTSB investigators continue to review documentation, event recorder data and perform interviews. A preliminary report is expected to publish in two weeks.

While on scene, NTSB Member Michael Graham hosted two press briefing on [Feb. 4](#) and [Feb. 5](#), which are available on NTSB's [YouTube](#) channel. [B-Roll](#) is also available on YouTube.

Editor's note: An earlier version of this release indicated 10 hazardous material railcars were part of the derailment. The actual number is 11. To report an incident/accident or if you are a public safety agency, please call 1-844-373-9922 or 202-314-6290 to speak to a Watch Officer at the NTSB Response Operations Center (ROC) in Washington, DC (24/7).

Exhibit 3



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

February 10, 2023

REPLY TO THE ATTENTION OF:
SE-5J

VIA EMAIL AND FED EX OVERNIGHT DELIVERY
SIGNATURE REQUIRED

Norfolk Southern Railway Company
c/o Matt Gernand, Deputy General Counsel
650 West Peachtree Street NW
Atlanta, Georgia 30308

Re: East Palestine Train Derailment Site
Norfolk Southern Rail Line, East Palestine, Columbiana County, Ohio
Site/Spill Identifier (SSID): C5XR
General Notice of Potential Liability

Dear Mr. Gernand:

The U.S. Environmental Protection Agency has documented the release or threat of release of hazardous substances, pollutants or contaminants into the environment from the East Palestine Train Derailment Site (the Site) located in East Palestine, Ohio (Latitude: 40.8360864°N, Longitude: -80.5215884°W). On February 3, 2023, at approximately 8:55 PM EST, a Norfolk Southern train comprised of roughly 150 rail cars derailed. Approximately 20 rail cars were listed as carrying hazardous materials. Cars containing vinyl chloride, butyl acrylate, ethylhexyl acrylate, and ethylene glycol monobutyl ether are known to have been and continue to be released to the air, surface soils, and surface waters.

Under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as the federal "Superfund" law, EPA is responsible for responding to the release or threat of release of hazardous substances, pollutants or contaminants into the environment – that is, for stopping further contamination from occurring and for cleaning up or otherwise addressing any contamination that has already occurred. EPA has spent, or is considering spending, public funds to investigate and control releases of hazardous substances or potential releases of hazardous substances at the Site. Based on information presently available to EPA, EPA has determined that Norfolk Southern Railway Company (Norfolk Southern or "you") may be responsible under CERCLA for cleanup of the Site or costs EPA has incurred in cleaning up the Site.

Property Access Agreement and Release

Date:	2/11/23
Full Address: ("Property")	[REDACTED]
Phone Number:	[REDACTED]

I, Katlyn [REDACTED], the legal and rightful owner or occupant of the Property ("Landowner"), hereby authorize Norfolk Southern, its affiliates, subsidiaries, parents, contractors, associated environmental professionals, and assisting local, state, and federal agencies, including but not limited to CTEH LLC and any of their personnel (collectively, "Monitoring Team") to access the Property for air monitoring or environmental sampling:

☐ outside the home or structure at the Property

☐ inside the home or structure at the Property

Landowner agrees to indemnify, release, and hold harmless Unified Command from and against any and all legal claims, including for personal injury or property damage, arising from Monitoring Team's performance of air monitoring or environmental sampling at the Property on the date of signature below.

Landowner states he or she has the authority to grant access to the Property and to sign this document.

Signature of Landowner:	[REDACTED]
Printed Name:	Katlyn [REDACTED]
Signed On (Date):	

Operation Home Safely FAQ Sheet

Taggart Road Incident – East Palestine, OH

General Information Regarding the Incident

Just before 9:00 PM on February 3, 2023, a train derailed in East Palestine, Ohio on Taggart Road. Approximately 50 railcars were involved in the derailment, ten of which contained hazardous materials including vinyl chloride, combustible liquids (ethylene glycol monobutyl ether acetate, 2-ethylhexyl acrylate), isobutylene, n-butyl acrylate, and benzene residue (meaning the cars had previously carried benzene). A number of local, state, and federal agencies responded to the incident along with the railroad and their emergency response contractors. A precautionary evacuation and shelter-in-place was ordered to ensure the safety of the public.

The air has been, and is continued to be, tested 24 hours per day throughout the evacuation zone and in the community outside the evacuation zone. The results of air monitoring indicate no detections of vinyl chloride in the community and support that the air in the community is safe for residents to return home.

If you live within the evacuation zone, when you re-enter your home following the lift of evacuation orders, you will have the voluntary option of being accompanied by environmental professionals and a representative of the United States Environmental Protection Agency (US EPA), who will conduct air monitoring in and around your home to ensure that unsafe levels of substances are not present in your home.

Frequently Asked Questions

Is the air safe?

Yes – Air monitoring is being performed 24 hours a day in the community for the substances associated with the derailment and fire. Air monitoring results indicate that the air in the community is safe. Similarly, if you live within the evacuation zone, we will monitor the air in and around your home at your request to confirm that your home is safe to re-enter.

Is my drinking water safe?

Yes – the East Palestine water supply comes from a series of groundwater wells. Due to the location of the derailment, it is improbable that substances from the derailment have impacted or will impact the groundwater or drinking water wells in the area. We are performing sampling of surface waters downstream of the derailment site, but any surface water detections from the derailment will not affect your drinking water.

I smell a strange odor. Should I be worried?

Some of the substances associated with the derailment can be smelled even when instrument air monitoring findings are non-detect or below a level of concern. Similarly, non-hazardous materials can produce odors when on fire. While these odors may be irritating, they do not indicate that you are being exposed. Air monitoring in the community is ongoing and will continue until clean-up is complete.

4.2 Unified Incident Command System

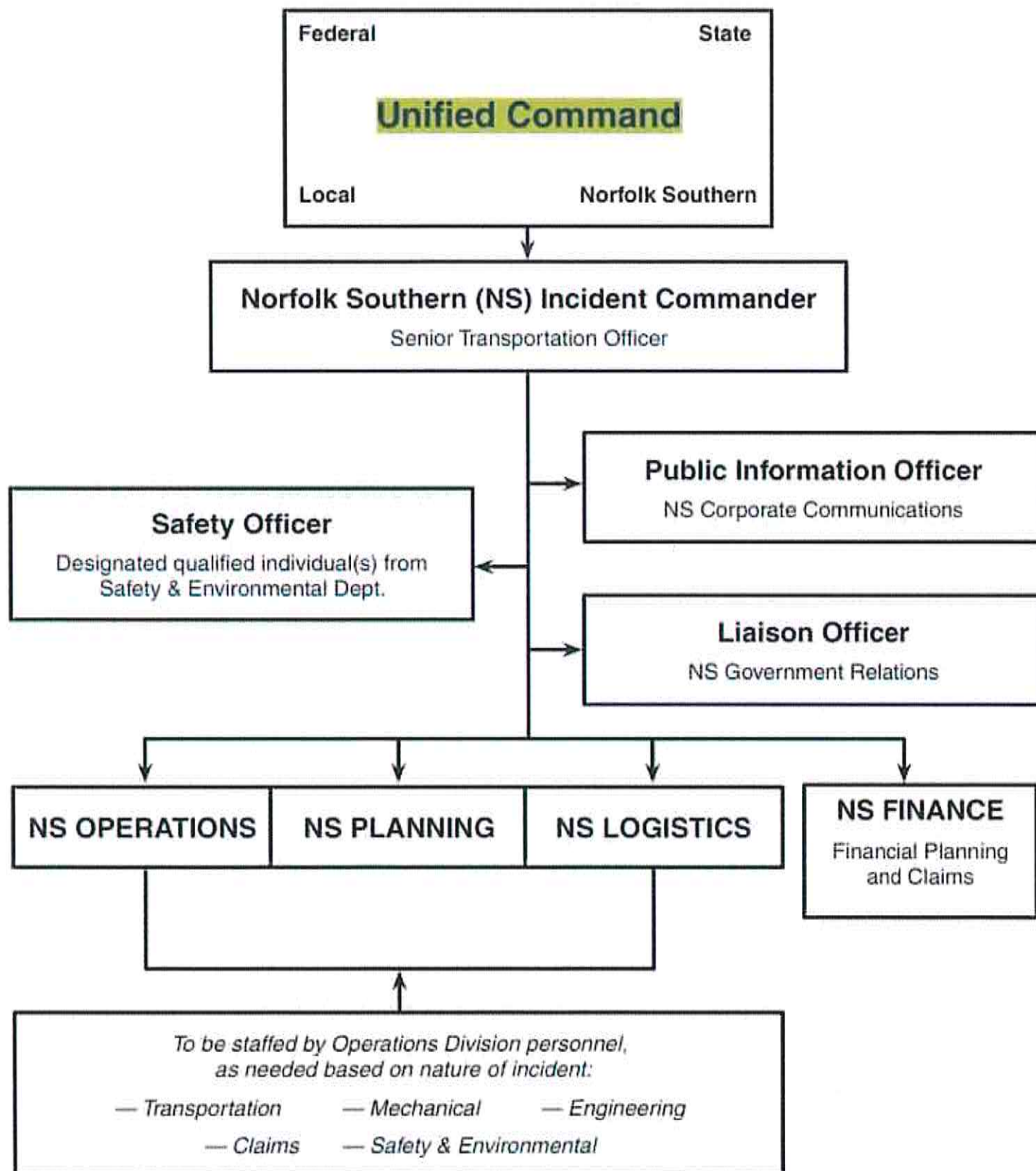


Exhibit 4



GOVERNOR JOSH SHAPIRO

February 14, 2023

Alan Shaw, President and CEO
Norfolk Southern Corporation
1200 Peachtree Street, NE
Atlanta, GA 30309

Dear Mr. Shaw:

I am writing to express my serious concerns regarding Norfolk Southern Corporation's management of the Norfolk Southern train derailment that occurred near East Palestine, Ohio on February 3. The derailment occurred approximately a quarter mile from the Pennsylvania state line and has had a significant impact on the residents, businesses, and environment in Beaver County.

Earlier today, I met with elected leaders and emergency management officials in Beaver County, including State Senator Camera Bartolotta, State Rep. Josh Kail, State Rep. Jim Marshall, State Rep. Robert Matzie, Beaver County Commissioners Dan Camp, Jack Manning, and Tony Amadio, and Beaver County Emergency Services Deputy Director Kevin Whipple, who share my concerns about Norfolk Southern's poor handling of this incident.

The Pennsylvania Department of Environmental Protection (DEP) and Pennsylvania Emergency Management Agency (PEMA) were not immediately contacted by Norfolk Southern and learned of the incident independently in the first few hours after it occurred and immediately began monitoring for impacts to the residents, businesses, and environment in the Commonwealth. Through this process, DEP and PEMA observed at least three priority issues with Norfolk Southern's management of the response that put the safety of our first responders and residents at significant risk.

First, Norfolk Southern failed to implement Unified Command, creating confusion and resulting in a general lack of awareness for first responders and emergency management of the tactics Norfolk Southern planned in response. Early in the incident, Norfolk Southern personnel separated themselves from the rest of the incident management structure at the Incident Command Post to conduct separate operational and tactical planning, forcing state and local response agencies to react to tactics that were developed unilaterally and without the combined input of key state agencies.

Mr. Shaw
February 14, 2023
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Second, Norfolk Southern gave inaccurate information and conflicting modeling about the impact of the controlled release that made protective action decision making more difficult in the immediate aftermath of the derailment. Norfolk Southern failed to notify state and local response agencies initially of their intention to vent and burn all five cars containing vinyl chloride, rather than just the single car Norfolk Southern personnel identified originally. Furthermore, Norfolk Southern failed to immediately inform authorities as to the number of rail cars that contained dangerous chemicals. Norfolk Southern's failure to participate in the Unified Command and share accurate information led to confusion and wide variability in potentially affected population estimates in the downwind plume impacting the Commonwealth.

Third, Norfolk Southern's unwillingness to explore or articulate alternate courses of action to their proposed vent and burn limited state and local leaders' ability to respond effectively. As discussed, Norfolk Southern response personnel improperly planned tactical response operations without adequate input from elected officials, local response organizations, or state agencies, resulting in a single plan of action to vent and burn all five cars without allowing for input from Pennsylvania emergency management leaders. Norfolk Southern failed to explore all potential courses of action, including some that may have kept the rail line closed longer but could have resulted in a safer overall approach for first responders, residents, and the environment.

While I appreciate that responding to train derailments presents an array of complex challenges, failure to adhere to well-accepted standards of practice related to incident management and prioritizing an accelerated and arbitrary timeline to reopen the rail line injected unnecessary risk and created confusion in the process. You can be assured that Pennsylvania will hold Norfolk Southern accountable for any and all impacts to our Commonwealth.

Norfolk Southern has repeatedly assured us of the safety of their rail cars — in fact, leading Norfolk Southern personnel described them to me as "the Cadillac of rail cars" — yet despite these assertions, these were the same cars that Norfolk Southern personnel rushed to vent and burn without gathering input from state and local leaders. Norfolk Southern's well known opposition to modernized regulations require further scrutiny and investigation to limit the devastating effects of future accidents on peoples' lives, property, businesses, and the environment.

While regulation of the railroad industry is largely the purview of our federal partners, we plan to take direct action here in the Commonwealth of Pennsylvania. I have called on the Pennsylvania Public Utility Commission, which is charged with oversight of the Commonwealth's railroads, to review Norfolk Southern's conduct and report back their findings. Like me, members of our state legislative delegation are troubled by the conduct of Norfolk Southern during this incident. As they proceed with their review and

Mr. Shaw
February 14, 2023
Page Three

oversight responsibilities, I have pledged offered the full cooperation of my Administration in order to help them facilitate holding your company accountable to Pennsylvanians.

I have also spoken directly with the President of the United States and the U.S. Secretary of Transportation, who have both pledged their full support to the people of Pennsylvania and have been constructive partners during this process. I urge the federal Pipeline and Hazardous Materials Safety Administration (PHMSA) to reexamine what constitutes a high-hazard flammable train and revisit the need for regulation requiring high-hazard flammable trains to carry more advanced safety and braking equipment.

As you conduct your after-action report, I expect you to address these concerns and report back on what steps you are taking to rectify the situation and ensure this does not happen again.

I await your response.



Governor Josh Shapiro

CC:

Secretary Pete Buttigieg, United States Department of Transportation
Senator Bob Casey
Senator John Fetterman
Congressman Chris Deluzio
Acting Attorney General Michelle Henry
State Senator Elder Vogel Jr.
State Senator Camera Bartolotta
State Representative Jim Marshall
State Representative Josh Kail
State Representative Robert Matzie
Beaver County Commissioner Dan Camp
Beaver County Commissioner Jack Manning
Beaver County Commissioner Tony Amadio
Beaver County Emergency Services Deputy Director Kevin Whipple
Chairman Gladys Brown Dutrieuille, Pennsylvania Public Utilities Commission

Exhibit 5

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGIONS 3 AND 5

IN THE MATTER OF:

East Palestine Train Derailment Site
East Palestine, Columbiana County, Ohio

Norfolk Southern Railway Company,

Respondent

Proceeding under Section 106(a)
of the Comprehensive Environmental
Response, Compensation, and Liability
Act, as amended, 42 U.S.C. § 9606(a).

CERCLA Docket No. V-W-23-C-004

**UNILATERAL ADMINISTRATIVE
ORDER FOR REMOVAL ACTIONS**

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I. JURISDICTION AND GENERAL PROVISIONS

1. This Administrative Order (“Order”) is issued under the authority vested in the President of the United States by Section 106(a) of the Comprehensive Environmental Response, Compensation, and Liability Act, (CERCLA), as amended, 42 U.S.C. § 9606(a). This authority was delegated to the Administrator of the United States Environmental Protection Agency (EPA) by Executive Order No. 12580, 52 Fed. Reg. 2923 (Jan. 23, 1987), and further delegated to the Regional Administrators by EPA Delegation Nos. 14-14A and 14-14B. This authority was further redelegated by the Regional Administrator of EPA Region 5 to the Director of the EPA Region 5 Superfund & Emergency Management Division by EPA Region 5 Delegation Nos. 14-14-A (Aug. 24, 2015) and 14-14-B (May 11, 1996) and by the Regional Administrator of EPA Region 3 to the Director of the EPA Region 3 Superfund & Emergency Management Division by EPA Region 3 Delegation Nos. 14-14-A (April 15, 2019) and 14-14-B (April 15, 2019).

2. This Order pertains to property located at the Rail Line east northeast of the intersection of East Taggart Street and North Pleasant Drive (Latitude: 40.8360395; Longitude: 80.5222838) in East Palestine, Ohio (the “East Palestine Train Derailment Site”), which is more specifically defined in the definition of “Site” in Paragraph 6, below. In addition to the response actions that are currently occurring, this Order requires Respondent to conduct removal actions described herein to abate an imminent and substantial endangerment to the public health or welfare or the environment that may be presented by the actual or threatened release of hazardous substances at or from the Site.

3. EPA has notified the State of Ohio and the Commonwealth of Pennsylvania (collectively, the “States”) of this action pursuant to Section 106(a) of CERCLA, 42 U.S.C. § 9606(a).

II. PARTIES BOUND

4. This Order applies to and is binding upon Respondent and its successors and assigns. Any change in ownership or control of the Site or change in the corporate or partnership status of Respondent, including, but not limited to, any transfer of assets or real or personal property, shall not alter Respondent’s responsibilities under this Order.

5. Respondent shall provide a copy of this Order to each contractor hired to perform the Work required by this Order and to each person representing the Respondent with respect to the Site or the Work, and shall condition all contracts entered into hereunder upon performance of the Work in conformity with the terms of this Order. Respondent or its contractors shall provide written notice of the Order to all subcontractors hired to perform any portion of the Work required by this Order. Respondent shall nonetheless be responsible for ensuring that its contractors and subcontractors perform the Work in accordance with the terms of this Order.

III. DEFINITIONS

6. Unless otherwise expressly provided in this Order, terms used in this Order that are defined in CERCLA or in regulations promulgated under CERCLA shall have the meaning assigned to them in CERCLA or in such regulations. Whenever terms listed below are used in this

Order or in appendices to or documents incorporated by reference into this Order, the following definitions shall apply:

“Affected Property” shall mean all real property at the Site and any other real property where EPA determines, at any time, that access or land, water, or other resource, use restrictions are needed to implement the removal action.

“CERCLA” shall mean the Comprehensive Environmental Response, Compensation, and Liability Act, as amended, 42 U.S.C. §§ 9601-9675.

“Day” or “day” shall mean a calendar day. In computing any period of time under this Order, where the last day would fall on a Saturday, Sunday, or federal or State holiday, the period shall run until the close of business of the next working day.

“Effective Date” shall mean the effective date of this Order as provided in Section VIII.

“EPA” shall mean the United States Environmental Protection Agency and its successor departments, agencies, or instrumentalities.

“EPA Hazardous Substance Superfund” shall mean the Hazardous Substance Superfund established by the Internal Revenue Code, 26 U.S.C. § 9507.

“OEPA” shall mean the Ohio Environmental Protection Agency and any successor departments or agencies of the State of Ohio.

“PADEP” shall mean the Pennsylvania Department of Environmental Protection and any successor departments or agencies of the Commonwealth of Pennsylvania.

“Interest” shall mean interest at the rate specified for interest on investments of the EPA Hazardous Substance Superfund established by 26 U.S.C. § 9507, compounded annually on October 1 of each year, in accordance with 42 U.S.C. § 9607(a). The applicable rate of interest shall be the rate in effect at the time the interest accrues. The rate of interest is subject to change on October 1 of each year. Rates are available online at <https://www.epa.gov/superfund/superfund-interest-rates>.

“National Contingency Plan” or “NCP” shall mean the National Oil and Hazardous Substances Pollution Contingency Plan promulgated pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605, codified at 40 C.F.R. Part 300, and any amendments thereto.

“Non-Respondent Owner” shall mean any person, other than Respondent, that owns or controls any Affected Property. The phrase “Non-Respondent Owner’s Affected Property” means Affected Property owned or controlled by Non-Respondent Owner.

“Order” shall mean this Unilateral Administrative Order and all appendices attached hereto. In the event of conflict between this Order and any appendix, this Order shall control.

“Paragraph” shall mean a portion of this Order identified by an Arabic numeral or an upper or lower case letter.

“Parties” shall mean EPA and Respondent.

“Post-Removal Site Control” shall mean actions necessary to ensure the effectiveness and integrity of the removal action to be performed pursuant to this Order consistent with Sections 300.415(l) and 300.5 of the NCP and “Policy on Management of Post-Removal Site Control” (OSWER Directive No. 9360.2-02, Dec. 3, 1990).

“RCRA” shall mean the Resource Conservation and Recovery Act, also known as the Solid Waste Disposal Act, as amended, 42 U.S.C. §§ 6901-6992.

“Respondent” shall mean Norfolk Southern Railway Company.

“Response Costs” shall mean all costs, including, but not limited to, direct and indirect costs, that the United States incurs in monitoring and supervising Respondent’s performance of the Work to determine whether such performance is consistent with the requirements of this Order, including costs incurred in reviewing deliverables submitted pursuant to this Order, as well as costs incurred in overseeing implementation of this Order, including, but not limited to, payroll costs, contractor costs, travel costs, and laboratory costs.

“Section” shall mean a portion of this Order identified by a Roman numeral.

“Site” shall mean the areal extent of where hazardous substances have come to be located, in Ohio and Pennsylvania, as a result of the Norfolk Southern Railway Company train derailment that occurred on February 3, 2023, at the rail line northeast of East Taggart Street and North Pleasant Drive intersection in East Palestine, Columbiana County, Ohio (Latitude: 40.8360395 Longitude: 80.5222838) and the subsequent emergency response activities including, but not limited to, breached rail cars and the controlled “vent and burn” that occurred on February 6, 2023.

“States” shall mean the State of Ohio and the Commonwealth of Pennsylvania.

“Transfer” shall mean to sell, assign, convey, lease, mortgage, or grant a security interest in, or where used as a noun, a sale, assignment, conveyance, or other disposition of any interest by operation of law or otherwise.

“United States” shall mean the United States of America and each department, agency, and instrumentality of the United States, including EPA.

“Waste Material” shall mean (a) any “hazardous substance” under Section 101(14) of CERCLA, 42 U.S.C. § 9601(14); (b) any pollutant or contaminant under Section 101(33) of CERCLA, 42 U.S.C. § 9601(33); (c) any “solid waste” under Section 1004(27) of RCRA, 42 U.S.C. § 6903(27); (d) any “hazardous waste” under 37 Ohio Rev. Code § 3734.01(J); (e) any “hazardous substance” under 27 P.S. § 6020.103 and (f) any “hazardous waste” under 25 Pa. Code 261a.3.

“Work” shall mean all activities Respondent is required to perform under this Order, except those required by Section XV (Retention of Records).

IV. FINDINGS OF FACT

7. The East Palestine Train Derailment Site is located in East Palestine, Columbiana County, Ohio, at approximately Latitude: 40.8360395; Longitude: -80.5222838. which is more specifically defined in the definition of “Site” in Paragraph 6 above.

8. The area immediately south of the Site is a mixed-use commercial, industrial, and residential area. The area north of the Site is a commercial and industrial area, with additional residences to the northeast. The nearest residences are less than 1,000 feet from the derailment Site.

9. The East Palestine Train Derailment Site is located within a mixed-use residential, commercial, and industrial area, with residential properties northwest, southeast, and south of the derailment area. Residential properties are also located along contaminated waterways which became contaminated after the derailment and are within the affected area. The Ohio-Pennsylvania border is located less than a mile from the derailment location. The nearest public well supply is located approximately one (1) mile from the derailment location. A ditch, located on the south side of the tracks flows west for approximately 1,000 feet before it empties into Sulphur Run, which joins Leslie Run, to Bull Creek, to North Fork Little Beaver Creek, to Little Beaver Creek before emptying into the Ohio River. Wetlands and State Line Lake are located immediately adjacent to the Northeast of the Site. Segments of the affected waterways are considered to be habitat for the Eastern Hellbender, an endangered species of salamander.

10. Norfolk Southern Railway Company owns and operates a Class I freight railroad that passes through the town of East Palestine, Ohio.

11. A train derailment occurred at approximately 2055 eastern standard time (EST) on February 3, 2023, in East Palestine, Columbiana County, Ohio, less than a mile from the Ohio-Pennsylvania border. Norfolk Southern Railway Company reported the incident at 2253 EST to the National Response Center (NRC). Federal, state, and local officials arrived on scene after the derailment. EPA mobilized to the Site with EPA Superfund Technical Assessment and Response Team (START) at approximately 2330 EST on February 3, 2023. Norfolk Southern Railway Company, Ohio Environmental Protection Agency (OEPA), Columbiana County, Village of East Palestine, Pennsylvania Department of Environmental Protection (PADEP), Ohio Department of Natural Resources (ODNR), Butler County Incident Management Team (IMT), Federal Railroad Administration (FRA), National Transportation Safety Board (NTSB), and other agencies also mobilized to the Site. EPA coordinated with the Interagency Modeling and Atmospheric Assessment Center (IMAAC) to provide plume modeling throughout the duration of the derailment fire.

12. At the time of the initial report, the number of derailed rail cars (of the 149) was unknown but 20 of the rail cars were listed by Norfolk Southern Railway Company as carrying hazardous materials, described as: Vinyl Chloride, Stabilized (5); Sulfuric Acid (5); Ethylene Glycol Monobutyl Ether (1); Butyl Acrylate, Stabilized (2); Combustible Liquids nos (1);

Isobutylene (1) Ethyl-Hexyl Acrylate(1); Empty Residue – last contained liquified petroleum gas (LPG) (1); Residue – last contained Benzene (2).

13. The derailment resulted in a large fire affecting numerous rail cars, including rail cars carrying hazardous materials, although the status (e.g. breached, burning, etc.) was initially unknown due to safety concerns associated with the fire as well as the position of the derailed cars, which affected the ability of responders to identify which rail cars were actively breached and/or burning. Initially, a shelter-in-place order was recommended, and firefighting efforts were stood down due to safety concerns; however, an evacuation order was enacted by the Village of East Palestine on February 4, 2023. The fire continued to burn throughout the following days. Local citizens reported smoke from the fire observed over the State of Ohio and the Commonwealth of Pennsylvania.

14. Ohio officials, working with the Fire Chief as Incident Commander, evacuated residents within a one-mile radius and took other emergency actions to protect human health and the environment in the aftermath of the derailment. EPA supported these efforts with air monitoring and sampling, including EPA's Airborne Spectral Photometric Environmental Collection Technology (ASPECT) aircraft, and sampling and indoor air monitoring on a voluntary basis. In addition, a mobile laboratory was mobilized to analyze air samples.

15. After monitoring on February 5, 2023, indicated rising temperatures in a tank car containing vinyl chloride, Respondent, in consultation with Ohio response officials, vented and burned product into a flare trench on February 6, 2023, in order to prevent a catastrophic explosion of the rail car.

16. The February 6, 2023, controlled "vent and burn" involved five (5) rail cars containing vinyl chloride in a flare trench to prevent a catastrophic explosion of the rail cars. In advance of the controlled "vent and burn" and based on plume modeling conducted by IMAAC and the Ohio National Guard 52nd Civil Support Team, the evacuation radius described in Paragraph 13 was increased to a roughly one-mile by two-mile area pursuant to evacuation orders issued by the State of Ohio and the Commonwealth of Pennsylvania.

17. Norfolk Southern Railway Company provided response officials at the Site, including EPA, with a list of the contents of the rail cars which derailed at the Site. See Appendix A. On February 3, 2023, at 2201 EST, Norfolk Southern Railway Company provided response officials at the Site with a consist (manifest) which details the volume of materials in each rail car. See Appendix B. Rail cars 23 through 74 were the rail cars which derailed, eleven of which contained hazardous materials. See Appendix C for a labeled aerial photo of a subset of those cars. The hazardous materials contained in these eleven rail cars are as follows:

Rail Car #	Hazardous Materials	Amount
TILX 402025	Vinyl Chloride	178,300 pounds
OCPX 80235	Vinyl Chloride	177,250 pounds

OCPX 80179	Vinyl Chloride	177,600 pounds
GATX 95098	Vinyl Chloride	178,150 pounds
OCPX 80370	Vinyl Chloride	176,100 pounds
SHPX 211226	Ethylene Glycol Monobutyl Ether	185,750 pounds
DOWX 73168	Ethylhexyl Acrylate	205,900 pounds
UTLX 205907	Butyl Acrylate	180,000 pounds
NATX 35844	Isobutylene	155,642 pounds
DPRX 259013	Benzene	Residue
DPRX 258671	Benzene	Residue

18. Releases of hazardous substances occurred after the derailment and subsequent fires. Releases to the air occurred when hazardous substances spilled from the rail cars, when smoke from burning rail cars was produced, and hazardous substances including vinyl chloride, phosgene and hydrogen chloride were released. Releases to surface water occurred when liquid product exited rail cars and also when run-off from firefighting efforts at the derailment location moved through a ditch to Sulphur Run, which joins Leslie Run, to Bull Creek, to North Fork Little Beaver Creek, to Little Beaver Creek, and then the Ohio River. Releases to soil occurred (1) when liquid product exited rail cars after the derailment (2) when run-off from firefighting efforts at the derailment location flowed from the right-of-way to adjoining property, and (3) when ash from the burns landed on soil. Local citizens reported smoke from the burns observed over the State of Ohio and the Commonwealth of Pennsylvania.

19. Populations at risk include:

- a. Human residents;
- b. Human workers;
- c. Wildlife including but not limited to:
 - (1) Several fish species as well as the eastern hellbender, an endangered species with habitat within portions of the affected waterways;
 - (2) Domesticated pets;

- d. Agricultural areas which supply the human food supply and the animal food chain.

20. The following are health/environmental effects associated with the hazardous materials involved in the derailment, or were detected in air, water, soil, and sediment samples, or were combustion by-products of some of those chemicals at the Site:

- a. **Vinyl Chloride:** Breathing high levels of vinyl chloride can cause dizziness or sleepiness. Breathing very high levels can cause fainting and breathing even higher levels can cause death. Studies have shown chronic inhalation of vinyl chloride for several years causes changes in the structure of the liver, and individuals who breath high levels are more likely to experience these changes. Highly exposed workers have also developed liver cancer (angiosarcoma of the liver). The effects of ingesting high levels of vinyl chloride are unknown. Dermal exposure may cause numbness, redness, and blisters. Animal studies have shown that exposure to vinyl chloride during pregnancy can affect the growth and development of the fetus. Vinyl chloride is a known human carcinogen according to the Department of Health and Human Services (DHHS), the International Agency for Research or Cancer (IARC), and the EPA.

- b. **Ethylene Glycol Monobutyl Ether:** Routes of exposure include ingestion and dermal contact. Inhaling Ethylene glycol monobutyl ether can irritate the nose and throat. It can also cause nausea, vomiting, diarrhea, and abdominal pain. Exposure can cause headache, dizziness, lightheadedness, and passing out. It may damage the liver and kidneys.

- c. **Isobutylene:** Acute exposure to isobutylene is associated with the following health effects: irritation of eyes, nose, and throat; dermal contact can cause frostbite; headache, dizziness, lightheadedness, and fatigue. Higher levels of isobutylene can cause coma and death. Chronic health hazards include cancer hazard, reproductive hazard, and other long-term health effects.

- d. **Benzene:** Breathing very high levels of benzene can result in death, while high levels can cause drowsiness, dizziness, rapid heart rate, headaches, tremors, confusion, and unconsciousness. Exposure through ingestion can cause vomiting, irritation of the stomach, dizziness, sleepiness, convulsions, rapid heart rate, and death. The major effect of benzene from chronic exposure is on the blood. Benzene causes harmful effects on the bone marrow and can cause a decrease in red blood cells leading to anemia. It can also cause excessive bleeding and can affect the immune system, increasing the chance of infection. Benzene may affect menstruation and decrease the size of ovaries in women following many months of exposure to high levels. Benzene is a known human carcinogen according to the Department of Health and Human Services, the International Agency for Research or Cancer (IARC), and the EPA.

- e. **Butyl Acrylate:** Butyl acrylate can cause health effects due to inhalation and through dermal contact. Contact with butyl acrylate can irritate the nose, throat, and lungs. Butyl acrylate may cause a skin allergy. Exposure to butyl acrylate can cause headache, dizziness, nausea, and vomiting. Repeated exposure can lead to permanent lung damage.

- f. **Phosgene:** Exposure to phosgene in the air can cause eye and throat irritation. High amounts in the air can cause severe lung damage. Exposure can occur through

inhalation, dermal contact, or (less likely) ingestion. Higher levels of phosgene can cause lungs to swell, making it difficult to breathe. Even higher levels can result in severe lung damage that might lead to death. Dermal contact with phosgene can result in chemical burns or may cause frostbite.

g. **Hydrogen Chloride:** Hydrogen chloride is irritating and corrosive to any tissue it contacts. Brief exposure to low levels causes throat irritation. Exposure to higher levels can result in rapid breathing, narrowing of the bronchioles, blue coloring of the skin, accumulation of fluid in the lungs, and even death. Exposure to even higher levels can cause swelling and spasm of the throat and suffocation. Some people may develop an inflammatory reaction to hydrogen chloride. This condition is called reactive airways dysfunction syndrome (RADS), a type of asthma caused by some irritating or corrosive substances. Depending on the concentration, hydrogen chloride can produce conditions from mild irritation to severe burns of the eyes and skin. Long-term exposure to low levels can cause respiratory problems, eye and skin irritation, and discoloration of the teeth. Swallowing concentrated hydrochloric acid will cause severe corrosive injury to the lips, mouth, throat, esophagus, and stomach.

21. Acrylate odors were noted by responders during indoor air monitoring.

22. Acrylate odors along Sulphur Run, Leslie Run, Bull Creek, North Fork Little Beaver Creek, and Little Beaver Creek were noted by responders during sampling and containment activities.

23. ODNr reported an estimated number of aquatic animals killed at approximately 3,500. Those aquatic animals were found in Sulphur Run, Leslie Run, Bull Creek, and a portion of the North Fork of Beaver Creek. Most of the fish appear to be small suckers, minnows, darters, and sculpin. Most of these deaths are believed to have been caused by the immediate release of contaminants into the water.

24. Respondent is a corporation organized under the laws of the state of Virginia. Respondent is liable under CERCLA § 107(a)(1) as the owner and/or operator of the train that derailed at the Site, and as the owner and/or operator of the rail line from which the train derailed.

V. CONCLUSIONS OF LAW AND DETERMINATIONS

25. Based on the Findings of Fact set forth above, and the administrative record, EPA has determined that:

a. The East Palestine Train Derailment Site is a “facility” as defined by Section 101(9) of CERCLA, 42 U.S.C. § 9601(9).

b. Norfolk Southern Train 32N and the individual rail cars comprising the train are “rolling stock” and therefore are a “facility” as defined by Section 101(9) of CERCLA, 42 U.S.C. § 9601(9).

c. Respondent is a “person” as defined by Section 101(21) of CERCLA, 42 U.S.C. § 9601(21).

d. Respondent is a liable party under one or more provisions of Section 107(a) of CERCLA, 42 U.S.C. § 9607(a).

(1) Respondent Norfolk Southern Railway Company is the “owner” and/or “operator” of the facility, as defined by Section 101(20) of CERCLA, 42 U.S.C. § 9601(20), and within the meaning of Section 107(a)(1) of CERCLA, 42 U.S.C. § 9607(a)(1).

(2) Respondent Norfolk Southern Railway Company is the “owner” and/or “operator” of the facility at the time of disposal of hazardous substances at the facility, as defined by Section 101(20) of CERCLA, 42 U.S.C. § 9601(20), and within the meaning of Section 107(a)(2) of CERCLA, 42 U.S.C. § 9607(a)(2).

e. The contaminants vinyl chloride, benzene, and butyl acrylate found at the Site, as identified in the Findings of Fact above, are each a “hazardous substance” as defined by Section 101(14) of CERCLA, 42 U.S.C. § 9601(14) that may present an imminent and substantial danger to public health or welfare under Section 104(a)(1) of CERCLA, 42 U.S.C. § 9604(a)(1).

f. The conditions described in Paragraphs 7-24 of the Findings of Fact above constitute an actual and/or threatened “release” of a hazardous substance from the facility as defined by Section 101(22) of CERCLA, 42 U.S.C. § 9601(22).

g. The conditions at the Site may constitute a threat to public health or welfare or the environment, based on the factors set forth in Section 300.415(b)(2) of the NCP. These factors include, but are not limited to, the following:

(1) **actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances and pollutants or contaminants.** This factor is present at the Site due to the existence of the discharge of vinyl chloride and butyl acrylate to one or more of the following: surface soils, surface waters, and air. ODNr reports the total estimated number of aquatic animals killed at approximately 3,500. Those animals were found in Sulphur Run, Leslie Run, Bull Creek, and a portion of the North Fork of Beaver Creek. Most of the fish appear to be small suckers, minnows, darters, and sculpin. Most of these deaths are believed to have been caused by the immediate release of contaminants into the water. Additionally, waste piles containing mixtures of vinyl chloride, butyl acrylate, ethylhexyl acrylate, and ethylene glycol monobutyl ether remain on site and pose a threat of exposure should containment be compromised. Acrylate odors continue to be noted along portions of Sulphur and Leslie Run.

(2) **actual or potential contamination of drinking water supplies or sensitive ecosystems.** This factor is present at the Site due to the release of vinyl chloride, butyl acrylate, ethylhexyl acrylate, and ethylene glycol monobutyl ether to surface soils and surface waters. The releases have impacted drinking water

resulting in the closures of water intakes on the Ohio River and have the potential to affect groundwater used for drinking water and irrigation;

(3) **hazardous substances and pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release.** This factor is present at the Site due to the presence of damaged rail cars containing isobutylene and residual benzene. As of February 18, 2023, approximately 1,557,000 gallons of liquid wastes have been collected from the Site. OEPA has reported to EPA that as of February 17, 2023, 247,000 gallons have already been transported off site for disposal;

(4) **high levels of hazardous substances and pollutants or contaminants in soils largely at or near the surface, that may migrate.** This factor is present at the Site due to the breaching of rail cars releasing, but not limited to, vinyl chloride, butyl acrylate, ethylhexyl acrylate, and ethylene glycol monobutyl ether. As of February 18, 2023, approximately 13,600 cubic yards of grossly contaminated soils have been excavated and staged on Site;

(5) **weather conditions that may cause hazardous substances and pollutants or contaminants to migrate or be released.** This factor is present at the Site due to the continuing presence of hazardous substances, including but not limited to, vinyl chloride, butyl acrylate, ethylhexyl acrylate, and ethylene glycol monobutyl ether that were released from the derailment location to adjacent properties and downstream surface waters. Rainfall events have the potential to cause further releases to surface waters. Dry weather and remediation activities have the potential to result in the release of contaminated soils by tracking or dust emissions;

(6) **threat of fire or explosion.** This factor is present at the Site due to the continued presence of rail cars containing isobutylene (DOT Class 2.1 Flammable Gas) and residual benzene (DOT Class 3 Flammable Liquid);

(7) **other situations or factors that may pose threats to public health or welfare or the environment.** This factor is present at the Site due to the fact that a full assessment of the extent of contamination has not been completed.

h. The conditions described in Paragraphs 7-24 of the Findings of Fact above may constitute an imminent and substantial endangerment to the public health or welfare or the environment because of an actual or threatened release of a hazardous substance from the facility within the meaning of Section 106(a) of CERCLA, 42 U.S.C. § 9606(a).

i. The removal actions required by this Order are necessary to protect the public health, welfare, or the environment.

VI. ORDER

26. Based upon the Findings of Fact, Conclusions of Law and Determinations set forth above, and the administrative record, Respondents are hereby ordered to comply with all provisions of this Order and any modifications to this Order, including all appendices to this Order and all documents incorporated by reference into this Order.

VII. OPPORTUNITY TO CONFER

27. No later than 24 hours after this Order is signed by the Regional Administrators or their delegates, Respondent may, in writing, a) request a conference with EPA to discuss this Order, including its applicability, the factual findings and the determinations upon which it is based, the appropriateness of any actions Respondent is ordered to take, or any other relevant and material issues or contentions that Respondent may have regarding this Order, or b) notify EPA that it intends to submit written comments or a statement of position in lieu of requesting a conference.

28. If a conference is requested, Respondent may appear in person or by an attorney or other representative. Any such conference shall be held in person or by video conference at the discretion of EPA no later than 1 day after the conference is requested. Any written comments or statements of position on any matter pertinent to this Order must be submitted no later than 1 day after the conference or 2 days after this Order is signed if Respondent does not request a conference. This conference is not an evidentiary hearing, does not constitute a proceeding to challenge this Order, and does not give Respondent a right to seek review of this Order. Any request for a conference or written comments or statements should be submitted to:

Catherine Garypie, Office of Regional Counsel
U.S. Environmental Protection Agency
Region 5
77 West Jackson Blvd. (Mail Code C-14J)
Chicago, Illinois 60604
312-886-5825
garypie.catherine@epa.gov

and

Naeha Dixit, Office of Regional Counsel
U.S. Environmental Protection Agency
Region 5
77 West Jackson Blvd. (Mail Code C-14J)
Chicago, Illinois 60604
312-353-5542
dixit.naeha@epa.gov

VIII. EFFECTIVE DATE

29. This Order shall be effective 2 days after the Order is signed by the Regional Administrators or their delegates unless a conference is requested or notice is given that written materials will be submitted in lieu of a conference in accordance with Section VII (Opportunity to Confer). If a conference is requested or such notice is submitted, this Order shall be effective on the 2nd day after the day of the conference, or if no conference is requested, on the 1st day after written materials, if any, are submitted, unless EPA determines that the Order should be modified based on the conference or written materials. In such event, EPA shall notify Respondent, within the applicable 5 day period, that EPA intends to modify the Order. The modified Order shall be effective 5 days after it is signed by the Regional Administrators or their delegates.

IX. NOTICE OF INTENT TO COMPLY

30. On or before the Effective Date, Respondent shall notify EPA in writing of Respondent's irrevocable intent to comply with this Order. Such written notice shall be sent to EPA as provided in Paragraph 28. Respondent's written notice shall describe, using facts that exist on or prior to the Effective Date, any "sufficient cause" defense asserted by such Respondent under Sections 106(b) and 107(c)(3) of CERCLA, 42 U.S.C. §§ 9606(b) and 9607(c)(3). The absence of a response by EPA to the notice required by this Paragraph shall not be deemed to be acceptance of Respondent's assertions. Failure of Respondent to provide such notice of intent to comply within this time period shall, as of the Effective Date, be treated as a violation of this Order by Respondent.

X. DESIGNATION OF CONTRACTOR, PROJECT COORDINATOR, AND ON-SCENE COORDINATOR

31. **Selection of Contractors, Personnel.** All Work performed under this Order shall be under the direction and supervision of qualified personnel. Within 3 days after the Effective Date, and before the Work outlined below begins, Respondent shall notify EPA in writing of the names, titles, addresses, telephone numbers, email addresses, and qualifications of the personnel, including contractors, subcontractors, consultants, and laboratories to be used in carrying out such Work. If, after the commencement of the Work, Respondent retains additional contractors or subcontractors, Respondent shall notify EPA of the names, titles, contact information, and qualifications of such contractors or subcontractors retained to perform the Work at least 5 days prior to commencement of Work by such additional contractors or subcontractors. EPA retains the right, at any time, to disapprove of any or all of the contractors and/or subcontractors retained by Respondent. If EPA disapproves of a selected contractor or subcontractor, Respondent shall retain a different contractor or subcontractor and shall notify EPA of that contractor's or subcontractor's name, title, contact information, and qualifications within 2 days after EPA's disapproval. With respect to any proposed contractor, Respondent shall demonstrate that the proposed contractor demonstrates compliance with ASQ/ANSI E4:2014 "Quality management systems for environmental information and technology programs – Requirements with guidance for use" (American Society for Quality, February 2014), by submitting a copy of the proposed contractor's Quality Management Plan (QMP). The QMP should be prepared in accordance with "EPA Requirements for Quality Management Plans (QA/R-2)" (EPA/240/B-01/002, Reissued May 2006) or equivalent documentation as determined by EPA. The qualifications of the persons

undertaking the Work for Respondent shall be subject to EPA's review for verification based on objective assessment criteria (e.g., experience, capacity, technical expertise) and that they do not have a conflict of interest with respect to the project.

32. Within 3 days after the Effective Date, Respondent shall designate a Project Coordinator who shall be responsible for administration of the Work required by this Order and shall submit to EPA the designated Project Coordinator's name, title, address, telephone number, email address, and qualifications. To the greatest extent possible, the Project Coordinator shall be present on Site or readily available during the Work. EPA retains the right to disapprove of the designated Project Coordinator who does not meet the requirements of Paragraph 31 (Selection of Contractors, Personnel). If EPA disapproves of the designated Project Coordinator, Respondent shall retain a different Project Coordinator and shall notify EPA of that person's name, title, contact information, and qualifications within 1 day following EPA's disapproval. Respondent shall have the right to change its Project Coordinator, subject to EPA's right to disapprove. Respondent shall notify EPA 5 days before such a change is made. The initial notification may be made orally, but shall be promptly followed by a written notification. Communications between Respondent and EPA, and all documents concerning the activities performed pursuant to this Order, shall be directed to the Project Coordinator. Receipt by Respondent's Project Coordinator of any notice or communication from EPA relating to this Order shall constitute receipt by Respondent.

33. EPA has designated Ralph Dollhopf of the EPA Region 5, Superfund & Emergency Response Division, Emergency Response Branch, as the On-Scene Coordinator (OSC) for the Site and for Work performed in Ohio. EPA has designated Jack Kelly of the EPA Region 3, Superfund & Emergency Response Division, Emergency Response Branch, as its OSC for Work performed in Pennsylvania.

34. EPA will notify Respondent of a change of one of its designated OSCs. Communications between Respondent and EPA, and all documents concerning the activities performed pursuant to this Order, shall be directed to the OSCs in accordance with Paragraph 39.a(1).

35. The OSCs shall be responsible for overseeing Respondent's implementation of this Order. The OSCs shall have the authority vested in a Remedial Project Manager (RPM) and an OSC by the NCP, including the authority to halt, conduct, or direct any Work required by this Order, or to direct any other response action when s/he determines that conditions at the Site constitute an emergency situation or may present a threat to public health or welfare or the environment. Absence of one or both OSCs from the Site shall not be cause for stoppage or delay of Work.

XI. WORK TO BE PERFORMED

36. In addition to the actions that it is currently performing, Respondent shall perform, at a minimum, all actions necessary to implement the following items. The actions to be implemented generally include, but are not limited to, the following:

a. In conjunction with other federal, state and local agencies, Respondent shall participate in all required elements of the Site's response organization structure (Incident Command System) as established and coordinated by the OSCs;

b. Develop and implement a Security Plan;

c. Develop and implement an air monitoring and sampling plan for:

(1) Indoor air of occupied structures;

(2) Perimeter community air monitoring at any remediation areas;

d. Develop and implement a plan for the identification and delineation of the extent of contamination for:

(1) Surface and subsurface soils;

(2) Surface waters and sediments;

(3) Groundwater;

(4) Drinking water sources;

e. Develop and implement a plan for the containment and remediation of contaminated surface and sub-surface soils, surface waters and sediments, groundwater (including private, municipal, agricultural wells);

f. As of the date of issuance of this Order, EPA expects to clean up dust and debris in the interior and exterior of buildings resulting from the February 3, 2023, train derailment and subsequent fires upon request. If at a later date EPA determines that it is appropriate for Respondent to take over this task, Respondent will be required to develop and implement a plan for these cleanup activities;

g. Expected boundaries for work identified above are described below:

(1) For air, surface soil, interior and exterior home cleaning (1-mile x 2-mile evacuation area);

(2) For surface water and sediments (length of the contaminated surface waters from unnamed ditch to the Ohio River);

(3) For subsurface soils and groundwater (perimeter of and within the areal extent of derailment location); and

(4) Drinking water sources (1 mile radius from the derailment and a 250-foot buffer from the center line of the contaminated surface waters from unnamed ditch to the Ohio River).

h. Remove, secure, stage, consolidate, package, transport, and dispose of identified hazardous substances, pollutants, and contaminants at EPA-approved disposal facilities in accordance with the EPA's Off-Site Rule 40 C.F.R. § 300.440; and

i. Taking any response action to address all releases or threatened releases which EPA determines may pose an imminent and substantial endangerment to the public health or the environment.

37. For any regulation or guidance referenced in the Order, the reference will be read to include any subsequent modification, amendment, or replacement of such regulation or guidance. Such modifications, amendments, or replacements apply to the Work only after Respondent receives notification from EPA of the modification, amendment, or replacement.

38. Work Plan and Implementation

a. Within 7 days after the Effective Date, in accordance with Paragraph 39 (Submission of Deliverables), Respondent shall submit to EPA for review and approval draft work plans for performing the removal actions (collectively, the "Removal Work Plan") generally described in Paragraph 36 above. The draft Removal Work Plan shall provide a description of, and an expeditious schedule for, the Work required by this Order. The Removal Work Plan must describe all community impact mitigation activities to be performed to: (a) reduce impacts (e.g., air emissions, dust, odor, traffic, noise, temporary relocation, negative economic effects) to residential areas, schools, playgrounds, healthcare facilities, or recreational public areas frequented by community members ("Community Areas") during implementation of the Removal Action; (b) conduct monitoring in Community Areas of impacts from the implementation of the Removal Action; (c) communicate validated sampling data; and (d) make adjustments during the implementation of the Removal Action in order to further reduce negative impacts to affected Community Areas. The Removal Work Plan shall contain information about impacts to Community Areas that is sufficient to assist EPA's OSCs and Community Involvement Coordinator(s) in performing the evaluations described in the Superfund Community Involvement Handbook, OLEM 9230.0-51 (Mar. 2020). The Handbook is located at <https://www.epa.gov/superfund/superfund-community-involvementtools-and-resources#handbook>.

b. EPA may approve, disapprove, require revisions to, or modify the draft Removal Work Plan in whole or in part. If EPA requires revisions, Respondent shall submit a revised draft Removal Work Plan within 3 days after receipt of EPA's notification of the required revisions. Respondent shall implement the Removal Work Plan as approved in writing by EPA in accordance with the schedule approved by EPA. Once approved, or approved with modifications, the Removal Work Plan, the schedule, and any subsequent modifications shall be incorporated into and become fully enforceable under this Order.

c. Upon approval or approval with modifications of the Removal Work Plan Respondent shall commence implementation of the Work in accordance with the schedule included therein. Respondent shall not commence or perform any Work except in conformance with the terms of this Order. Respondent shall notify EPA at least 48 hours prior to performing any Work on-Site pursuant to the EPA-approved Removal Work Plan.

d. Unless otherwise provided in this Order, any additional deliverables that require EPA approval under the Removal Work Plan shall be reviewed and approved by EPA in accordance with this Paragraph.

e. Any non-compliance with any EPA-approved plans, reports, specifications, schedules, or other deliverables shall be considered a violation of the requirements of this Order. Determinations of non-compliance shall be made by EPA. Approval of the Removal Work Plan shall not limit EPA's authority under the terms of this Order to require Respondents to conduct activities consistent with this Order to accomplish the Work outlined in this Section.

39. Submission of Deliverables

a. General Requirements for Deliverables

(1) Except as otherwise provided in this Order, Respondent shall direct all submissions required by this Order to the OSCs at Ralph Dollhopf, On-Scene Coordinator, U.S. EPA Region 5, 2565 Plymouth Road – Mail Code SEAA, Ann Arbor, Michigan, 48105 (231/301-0559), dollhopf.ralph@epa.gov and Jack Kelly, On-Scene Coordinator, U.S. EPA Region 3, 1600 John F. Kennedy Boulevard, Philadelphia, Pennsylvania, 19103-2852 (215/814-3112), kelly.jack@epa.gov. Respondent shall submit all deliverables required by this Order or any approved work plan to EPA in accordance with the schedule set forth in such plan.

(2) Respondent shall direct all submissions required to be submitted to the State of Ohio by this Order to:

Anne Vogel, Director
Ohio EPA - Director's Office
P.O. Box 1049
Columbus, Ohio 43216-1049
614-644-2782
Anne.Vogel@epa.ohio.gov

(3) Respondent shall submit all deliverables in electronic form. Technical specifications for sampling and monitoring data and spatial data are addressed in Paragraph 39.b. All other deliverables shall be submitted to EPA in the form specified by an OSC. If any deliverable includes maps, drawings, or other exhibits that are larger than 8.5 x 11 inches, Respondent shall also provide EPA with paper copies of such exhibits.

b. Technical Specifications for Deliverables

(1) Sampling and monitoring data should be submitted in standard Regional EDD format as specified by EPA Regions 5 and 3. Other delivery methods may be allowed if electronic direct submission presents a significant burden or as technology changes.

(2) Spatial data, including spatially-referenced data and geospatial data, should be submitted: (a) in the ESRI File Geodatabase format ; and (b) as unprojected geographic coordinates in decimal degree format using North American Datum 1983 (NAD83) or World Geodetic System 1984 (WGS84) as the datum. If applicable, submissions should include the collection method(s). Projected coordinates may optionally be included but must be documented. Spatial data should be accompanied by metadata, and such metadata should be compliant with the Federal Geographic Data Committee (FGDC) Content Standard for Digital Geospatial Metadata and its EPA profile, the EPA Geospatial Metadata Technical Specification. An add-on metadata editor for ESRI software, the EPA Metadata Editor (EME), complies with these FGDC and EPA metadata requirements and is available at <https://www.epa.gov/geospatial/epa-metadata-editor>.

(3) Each file must include an attribute name for each site unit or sub-unit submitted. Consult <https://www.epa.gov/geospatial/geospatial-policies-and-standards> for any further available guidance on attribute identification and naming.

(4) Spatial data submitted by Respondent does not, and is not intended to, define the boundaries of the Site.

40. **Sampling and Analysis Plan.** Within 7 days after the Effective Date, Respondent shall submit a Sampling and Analysis Plan to EPA for review and approval. This plan shall consist of a Field Sampling Plan (FSP) and a Quality Assurance Project Plan (QAPP) that is consistent with the plans cited in the Work to Be Performed and the NCP, including, but not limited to, “Guidance for Quality Assurance Project Plans (QA/G-5)” EPA/240/R-02/009 (December 2002), “EPA Requirements for Quality Assurance Project Plans (QA/R-5)” EPA 240/B-01/003 (March 2001, reissued May 2006), and “Uniform Federal Policy for Quality Assurance Project Plans, Parts 1-3 EPA/505/B-04/900A-900C (March 2005). Upon its approval by EPA, the Sampling and Analysis Plan shall be incorporated into and become enforceable under this Order.

41. **Health and Safety Plan.** Within 7 days after the Effective Date, Respondent shall submit for EPA review and comment a Health and Safety Plan that ensures the protection of on-site workers and the public during performance of on-site Work under this Order. This plan shall be prepared in accordance with “OSWER Integrated Health and Safety Program Operating Practices for OSWER Field Activities,” Pub. 9285.0-OIC (Nov. 2002), available on the NSCEP database at <https://www.epa.gov/nscep>, and “EPA’s Emergency Responder Health and Safety Manual,” OSWER Directive 9285.3-12 (July 2005 and updates), available at https://www.epaossc.org/_HealthSafetyManual/manual-index.htm. In addition, the plan shall comply with all currently applicable Occupational Safety and Health Administration (OSHA) regulations found at 29 C.F.R. Part 1910. If EPA determines that it is appropriate, the plan shall also include contingency planning. Respondent shall incorporate all changes to the plan recommended by EPA and shall implement the plan during the pendency of the removal actions.

42. **Community Involvement Plan.** EPA has the lead responsibility for implementing community involvement activities at the Site, including the preparation of a community involvement plan, in accordance with the NCP and EPA guidance. As requested by EPA, Respondents shall participate in community involvement activities, including participation in (a) the preparation of information regarding the Work for dissemination to the public (including compliance schedules and progress reports), with consideration given to the specific needs of the community, including translated materials and mass media and/or Internet notification and (b) public meetings that may be held or sponsored by EPA to explain activities at or relating to the Site.

43. **Post-Removal Site Control.** In accordance with the Removal Work Plan schedule, or as otherwise directed by EPA, Respondent shall submit a proposal for Post-Removal Site Control. Upon EPA approval, Respondent shall either conduct Post-Removal Site Control activities, or obtain a written commitment from another party for conduct of such activities, until such time as EPA determines that no further Post-Removal Site Control is necessary. Respondent shall provide EPA with documentation of all Post-Removal Site Control commitments. Respondent shall implement post-removal site control consistent with the provisions of 40 C.F.R. § 300.415(l).

44. **Progress Reports.** Respondent shall submit a written progress report to EPA concerning actions undertaken pursuant to this Order on a weekly basis, or as otherwise requested by EPA, from the date of receipt of EPA's approval of the Removal Work Plan until issuance of Notice of Completion of Work pursuant to Section XXVII, unless otherwise directed in writing by an OSC. These reports shall describe all significant developments during the preceding period, including the actions performed and any problems encountered, analytical data received during the reporting period, and the developments anticipated during the next reporting period, including a schedule of actions to be performed, anticipated problems, and planned resolutions of past or anticipated problems.

45. **Final Report.** Within 30 days after completion of all Work required by this Order, with the exception of any continuing obligations required by this Order, including, but not limited to, post-removal site controls, reimbursement of Response Costs, or record retention, Respondent shall submit for EPA review and approval a final report summarizing the actions taken to comply with this Order. EPA will review and approve the final report in accordance with Section XXVII (Notice of Completion of Work). The final report shall conform, at a minimum, with the requirements set forth in Section 300.165 of the NCP, "OSC Reports." The final report shall include a good faith estimate of total costs or a statement of actual costs incurred in complying with the Order, a listing of quantities and types of materials removed off-Site or handled on-Site, a discussion of removal and disposal options considered for those materials, a listing of the ultimate destination(s) of those materials, a presentation of the analytical results of all sampling and analyses performed, and accompanying appendices containing all relevant documentation generated during the removal actions (e.g., manifests, invoices, bills, contracts, and permits). The final report shall also include the following certification signed by a responsible corporate official of a Respondent or Respondent's Project Coordinator: "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or

those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

46. Off-Site Shipments

a. Respondent may ship hazardous substances, pollutants, and contaminants from the Site to an off-Site facility only if they comply with Section 121(d)(3) of CERCLA, 42 U.S.C. § 9621(d)(3), and 40 C.F.R. § 300.440. Respondent will be deemed to be in compliance with CERCLA § 121(d)(3) and 40 C.F.R. § 300.440 regarding a shipment if Respondent obtains a prior determination from EPA that the proposed receiving facility for such shipment is acceptable under the criteria of 40 C.F.R. § 300.440(b).

b. Respondent may ship Waste Material from the Site to an out-of-state waste management facility only if, prior to any shipment, they provide written notice to the appropriate state environmental official in the receiving facility’s state and to the OSCs. This notice requirement will not apply to any off-Site shipments when the total quantity of all such shipments will not exceed ten cubic yards. The written notice must include the following information, if available: (1) the name and location of the receiving facility; (2) the type and quantity of Waste Material to be shipped; (3) the schedule for the shipment; and (4) the method of transportation. Respondent shall also notify the state environmental official referenced above and the OSCs of any major changes in the shipment plan, such as a decision to ship the Waste Material to a different out-of-state facility. Respondent shall provide the notice after the award of the contract for the removal action and before the Waste Material is shipped.

c. Respondent may ship Investigation Derived Waste (IDW) from the Site to an off-Site facility only if they comply with Section 121(d)(3) of CERCLA, 42 U.S.C. § 9621(d)(3), 40 C.F.R. § 300.440, EPA’s “Guide to Management of Investigation Derived Waste,” OSWER 9345.3-03FS (Jan. 1992). Wastes shipped off-Site to a laboratory for characterization, and RCRA hazardous wastes that meet the requirements for an exemption from RCRA under 40 C.F.R. § 261.4(e) shipped off-Site for treatability studies, are not subject to 40 C.F.R. § 300.440.

XII. QUALITY ASSURANCE, SAMPLING, AND DATA ANALYSIS

47. Respondent shall use quality assurance, quality control, and other technical activities and chain of custody procedures for all samples consistent with “EPA Requirements for Quality Assurance Project Plans (QA/R5),” EPA/240/B-01/003 (March 2001, reissued May 2006), “Guidance for Quality Assurance Project Plans (QA/G-5),” EPA/240/R-02/009 (December 2002), and “Uniform Federal Policy for Quality Assurance Project Plans,” Parts 1-3, EPA/505/B-04/900A-900C (March 2005).

48. Access to Laboratories

a. Respondent shall ensure that EPA and State personnel and their authorized representatives are allowed access at reasonable times to all laboratories utilized by Respondent

pursuant to this Order. In addition, Respondent shall ensure that such laboratories shall analyze all samples submitted by EPA pursuant to the QAPP for quality assurance, quality control, and technical activities that will satisfy the stated performance criteria as specified in the QAPP and that sampling and field activities are conducted in accordance with the Agency's "EPA QA Field Activities Procedure," CIO 2105-P-02.1 (9/23/2014) available at <https://www.epa.gov/irmpoli8/epa-qa-field-activities-procedures>. Respondent shall ensure that the laboratories they utilize for the analysis of samples taken pursuant to this Order meet the competency requirements set forth in EPA's "Policy to Assure Competency of Laboratories, Field Sampling, and Other Organizations Generating Environmental Measurement Data under Agency-Funded Acquisitions" available at <https://www.epa.gov/measurements/documents-about-measurement-competency-under-acquisition-agreements> and that the laboratories perform all analyses using EPA-accepted methods. Accepted EPA methods consist of, but are not limited to, methods that are documented in the EPA's Contract Laboratory Program (<https://www.epa.gov/clp>), SW 846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (<https://www.epa.gov/hw-sw846>), "Standard Methods for the Examination of Water and Wastewater" (<https://www.standardmethods.org/>), 40 C.F.R. Part 136, "Air Toxics - Monitoring Methods" (<https://www.epa.gov/amtic/air-toxics-ambient-monitoring#methods>)." However, upon approval by EPA, Respondent may use other appropriate analytical method(s), as long as (i) quality assurance/quality control (QA/QC) criteria are contained in the method(s) and the method(s) are included in the QAPP, (ii) the analytical method(s) are at least as stringent as the methods listed above, and (iii) the method(s) have been approved for use by a nationally recognized organization responsible for verification and publication of analytical methods, e.g., EPA, ASTM, NIOSH, OSHA, etc. Respondent shall ensure that all laboratories they use for analysis of samples taken pursuant to this Order have a documented Quality System that complies with ASQ/ANSI E4:2014 "Quality management systems for environmental information and technology programs – Requirements with guidance for use" (American Society for Quality, February 2014), and "EPA Requirements for Quality Management Plans (QA/R-2)" EPA/240/B-01/002 (March 2001, reissued May 2006), or equivalent documentation as determined by EPA. EPA may consider Environmental Response Laboratory Network (ERLN) laboratories, laboratories accredited under the National Environmental Laboratory Accreditation Program (NELAP), or laboratories that meet International Standardization Organization (ISO 17025) standards or other nationally recognized programs as meeting the Quality System requirements. Respondent shall ensure that all field methodologies utilized in collecting samples for subsequent analysis pursuant to this Order are conducted in accordance with the procedures set forth in the QAPP approved by EPA.

b. Upon request, Respondent shall provide split or duplicate samples to EPA and the States or their authorized representatives. Respondent shall notify EPA and the States not less than 5 days in advance of any sample collection activity. In addition, EPA and the States shall have the right to take any additional samples that EPA or the States deem necessary. Upon request, EPA shall provide to Respondent split or duplicate samples of any samples it takes as part of EPA's oversight of Respondent's implementation of the Work.

c. Respondent shall submit to EPA and the States, in the next monthly progress report as described in Paragraph 44 (Progress Reports) copies of the results of all sampling and/or tests or other data obtained or generated by or on behalf of Respondent with respect to the Site and/or the implementation of this Order.

XIII. PROPERTY REQUIREMENTS

49. **Agreements Regarding Access and Non-Interference.** Respondent shall, with respect to any Non-Respondent Owner's Affected Property, use best efforts to secure from such Non-Respondent Owner an agreement, enforceable by Respondent and EPA, providing that such Non-Respondent Owner, and Respondent shall, with respect to Respondent's Affected Property: (i) provide EPA, the applicable State, Respondent, and their representatives, contractors, and subcontractors with access at all reasonable times to such Affected Property to conduct any activity regarding the Order, including those activities listed in Paragraph 49.a (Access Requirements); and (ii) refrain from using such Affected Property in any manner that EPA determines will pose an unacceptable risk to human health or to the environment due to exposure to Waste Material, or interfere with or adversely affect the implementation, integrity, or protectiveness of the removal action. Respondent shall provide a copy of such access agreements to EPA and the applicable State.

a. **Access Requirements.** The following is a list of activities for which access is required regarding the Affected Property:

- (1) Monitoring the Work;
- (2) Verifying any data or information submitted to EPA or the State;
- (3) Conducting investigations regarding contamination at or near the Site;
- (4) Obtaining samples;
- (5) Assessing the need for, planning, implementing, or monitoring response actions;
- (6) Assessing implementation of quality assurance and quality control practices as defined in the approved quality assurance quality control plan;
- (7) Implementing the Work pursuant to the conditions set forth in Section XIX (Enforcement/Work Takeover);
- (8) Inspecting and copying records, operating logs, contracts, or other documents maintained or generated by Respondent or its agents, consistent with Section XIV (Access to Information);
- (9) Assessing Respondent's compliance with the Order;
- (10) Determining whether the Affected Property is being used in a manner that is prohibited or restricted, or that may need to be prohibited or restricted under the Order; and

(11) Implementing, monitoring, maintaining, reporting on, and enforcing any land, water, or other resource use restrictions regarding the Affected Property.

50. **Best Efforts.** As used in this Section, “best efforts” means the efforts that a reasonable person in the position of Respondent would use so as to achieve the goal in a timely manner, including the cost of employing professional assistance and the payment of reasonable sums of money to secure access and/or use restriction agreements, as required by this Section. If, within 15 days after it is known access is required at a particular property, Respondent is unable to accomplish what is required through “best efforts” it shall notify EPA, and include a description of the steps taken to comply with the requirements. If EPA deems it appropriate, it may assist Respondent or take independent action in obtaining such access and/or use restrictions. EPA reserves the right to seek payment from Respondent for all costs, including cost of attorneys’ time, incurred by the United States in obtaining such access or agreements to restrict land, water, or other resource use.

51. **Notice to Successors-in-Title**

a. Respondent shall, within 15 days after the Effective Date, submit for EPA approval a notice to be filed regarding Affected Property owned by Respondent in the appropriate land records. The notice must: (1) include a proper legal description of the Affected Property; (2) provide notice to all successors-in-title that: (i) the Affected Property is part of, or related to, the Site; (ii) EPA has selected a removal action for the Site; and (iii) EPA has ordered potentially responsible parties to implement that removal action; and (3) identify the EPA docket number and Effective Date of this Order. Respondent shall record the notice within 10 days after EPA’s approval of the notice and submit to EPA, within 10 days thereafter, a certified copy of the recorded notice.

b. Respondent shall, prior to entering into a contract to Transfer its Affected Property, or 60 days prior to Transferring its Affected Property, whichever is earlier:

(1) Notify the proposed transferee that EPA has selected a removal action regarding the Site, that EPA has ordered potentially responsible parties to implement such removal action, (identifying the EPA docket number and the Effective Date of this Order); and

(2) Notify EPA and the applicable State of the name and address of the proposed transferee and provide EPA and the applicable State with a copy of the above notice that it provided to the proposed transferee.

52. In the event of any Transfer of the Affected Property, unless EPA otherwise consents in writing, Respondent shall continue to comply with its obligations under this Order, including its obligation to secure access and ensure compliance with any land, water, or other resource use restrictions regarding the Affected Property.

53. Notwithstanding any provision of this Order, EPA and the States retain all of their access authorities and rights, as well as all of their rights to require land, water, or other resource

use restrictions, including enforcement authorities related thereto under CERCLA, RCRA, and any other applicable statute or regulations.

XIV. ACCESS TO INFORMATION

54. Respondent shall provide to EPA and the States, upon request, copies of all records, reports, documents, and other information (including records, reports, documents, and other information in electronic form) (hereinafter referred to as “Records”) within Respondent’s possession or control or that of its contractors or agents relating to activities at the Site or to the implementation of this Order, including, but not limited to, sampling, analysis, chain of custody records, manifests, trucking logs, receipts, reports, sample traffic routing, correspondence, or other documents or information regarding the Work. Respondent shall also make available to EPA and the States, for purposes of investigation, information gathering, or testimony, their employees, agents, or representatives with knowledge of relevant facts concerning the performance of the Work.

55. Privileged and Protected Claims

a. Respondent may assert that all or part of a Record requested by EPA or the States is privileged or protected as provided under federal law, in lieu of providing the Record, provided Respondent complies with Paragraph 55.b, and except as provided in Paragraph 55.c.

b. If Respondent asserts a claim of privilege or protection, it shall provide EPA and the States with the following information regarding such Record: its title; its date; the name, title, affiliation (e.g., company or firm), and address of the author, of each addressee, and of each recipient; a description of the Record’s contents; and the privilege or protection asserted. If a claim of privilege or protection applies only to a portion of a Record, Respondent shall provide the Record to EPA and the States in redacted form to mask the privileged or protected portion only. Respondent shall retain all Records that it claims to be privileged or protected until EPA and the States or a court determines that such Record is privileged or protected.

c. Respondent may make no claim of privilege or protection regarding: (1) any data regarding the Site, including, but not limited to, all sampling, analytical, monitoring, hydrogeologic, scientific, chemical, radiological, or engineering data, or the portion of any other Record that evidences conditions at or around the Site; or (2) the portion of any Record that Respondent is required to create or generate pursuant to this Order.

56. **Business Confidential Claims.** Respondent may assert that all or part of a Record provided to EPA and the States under this Section or Section XV (Retention of Records) is business confidential to the extent permitted by and in accordance with Section 104(e)(7) of CERCLA, 42 U.S.C. § 9604(e)(7), and 40 C.F.R. § 2.203(b). Respondent shall segregate and clearly identify all Records or parts thereof submitted under this UAO for which Respondent asserts business confidentiality claims. Records that Respondent claims to be confidential business information will be afforded the protection specified in 40 C.F.R. Part 2, Subpart B. If no claim of confidentiality accompanies Records when they are submitted to EPA and the States, or if EPA has notified Respondent that the Records are not confidential under the standards of

Section 104(e)(7) of CERCLA or 40 C.F.R. Part 2, Subpart B, the public may be given access to such Records without further notice to Respondent.

57. Notwithstanding any provision of this Order, EPA and the States retain all of their information gathering and inspection authorities and rights, including enforcement actions related thereto, under CERCLA, RCRA, and any other applicable statutes or regulations.

XV. RETENTION OF RECORDS

58. During the pendency of this Order and for a minimum of 10 years after Respondent's receipt of EPA's notification pursuant to Section XXVII (Notice of Completion of Work), Respondent shall preserve and retain all non-identical copies of Records (including Records in electronic form) now in its possession or control, or that come into its possession or control, that relate in any manner to its liability under CERCLA with respect to the Site, provided, however, that Respondent, as potentially liable as an owner or operator of the Site or part of the Site, must retain, in addition, all Records that relate to the liability of any other person under CERCLA with respect to the Site. Respondent must also retain, and instruct its contractors and agents to preserve, for the same period of time specified above, all non-identical copies of the last draft or final version of any Records (including Records in electronic form) now in its possession or control or that come into its possession or control that relate in any manner to the performance of the Work, provided, however, that Respondent (and its contractors and agents) must retain, in addition, copies of all data generated during performance of the Work and not contained in the aforementioned Records required to be retained. Each of the above record retention requirements shall apply regardless of any corporate retention policy to the contrary.

59. At the conclusion of this document retention period, Respondent shall notify EPA and the States at least 90 days prior to the destruction of any such Records, and, upon request by EPA or the States, and except as provided in Paragraph 55, Respondent shall deliver any such Records to EPA or the States.

60. Within 5 days after the Effective Date, Respondent shall submit a written certification to the OSCs that, to the best of its knowledge and belief, after thorough inquiry, it has not altered, mutilated, discarded, destroyed, or otherwise disposed of any Records (other than identical copies) relating to its potential liability regarding the Site since notification of its potential liability by the United States or the States, and that it has fully complied with any and all EPA or State requests for information regarding the Site pursuant to Sections 104(e) and 122(e) of CERCLA, 42 U.S.C. §§ 9604(e) and 9622(e), and Section 3007 of RCRA, 42 U.S.C. § 6927, or state law. If Respondent is unable to so certify, Respondent shall submit a modified certification that explains in detail why it is unable to certify in full with regard to all Records.

XVI. COMPLIANCE WITH OTHER LAWS

61. Nothing in this Order limits Respondent's obligations to comply with the requirements of all applicable state and federal laws and regulations, except as provided in Section 121(e) of CERCLA, 42 U.S.C. § 9621(e), and 40 C.F.R. §§ 300.400(e) and 300.415(j). In accordance with 40 C.F.R. § 300.415(j), all on-site actions required pursuant to this Order shall, to the extent practicable, as determined by EPA, considering the exigencies of the situation, attain

applicable or relevant and appropriate requirements (ARARs) under federal environmental or state environmental or facility siting laws.

62. No local, state, or federal permit shall be required for any portion of the Work conducted entirely on-site (i.e., within the areal extent of contamination or in very close proximity to the contamination and necessary for implementation of the Work), including studies, if the action is selected and carried out in compliance with Section 121 of CERCLA, 42 U.S.C. § 9621. Where any portion of the Work that is not on-site requires a federal or state permit or approval, Respondent shall submit timely and complete applications and take all other actions necessary to obtain and to comply with all such permits or approvals. This Order is not, and shall not be construed to be, a permit issued pursuant to any federal or state statute or regulation.

XVII. EMERGENCY RESPONSE AND NOTIFICATION OF RELEASES

63. **Emergency Response.** If any event occurs during performance of the Work that causes or threatens to cause a release of any Waste Material on, at, or from the Site that either constitutes an emergency situation or that may present an immediate threat to public health or welfare or the environment, Respondent shall immediately take all appropriate action to prevent, abate, or minimize such release or threat of release. Respondent shall take these actions in accordance with all applicable provisions of this Order, including, but not limited to, the Health and Safety Plan. Respondent shall also immediately notify the OSCs or, in the event of his/her unavailability, the Regional Duty Officer for Region 5 (at 312/353-2318) and Region 3 (at 215/814-3255) of the incident or Site conditions. In the event that Respondent fails to take appropriate response action as required by this Paragraph, and EPA takes such action instead, EPA reserves the right to pursue cost recovery.

64. **Release Reporting.** Upon the occurrence of any event during performance of the Work that Respondent is required to report pursuant to Section 103 of CERCLA, 42 U.S.C. § 9603, or Section 304 of the Emergency Planning and Community Right-To-Know Act (EPCRA), 42 U.S.C. § 11004, Respondent shall immediately orally notify an OSC, or, in the event of his/her unavailability, the Regional Duty Officer at Region 5 (at 312/353-2318) and Region 3 (at 215/814-3255) and the National Response Center at (800) 424-8802. This reporting requirement is in addition to, and not in lieu of, the reporting required by CERCLA §§ 103 and 111(g), or EPCRA § 304.

65. For any event covered under this Section, Respondent shall submit a written report to EPA within 7 days after the onset of such event, setting forth the action or event that occurred and the measures taken, and to be taken, to mitigate any release or threat of release or endangerment caused or threatened by the release and to prevent the reoccurrence of such a release or threat of release.

XVIII. PAYMENT OF RESPONSE COSTS

66. Upon EPA's written demand, Respondent shall pay EPA all Response Costs incurred or to be incurred in connection with this Order. On a periodic basis, EPA Regions 3 and 5 will send Respondent bills requiring payment of all Response Costs incurred by the United

States with respect to this Order that includes an Itemized Cost Summary, which includes direct and indirect costs incurred by EPA, its contractors, and the Department of Justice.

Respondent shall make all payments within 30 days after receipt of each written demand requiring payment.

Fedwire EFT: Federal Reserve Bank of New York
ABA: 021030004
Account: 68010727
SWIFT address: FRNYUS33
Field Tag 4200: D 68010727 Environmental Protection Agency

67. At the time of payment, Respondent shall send notice that payment has been made to dollhopf.ralph@epa.gov, kelly.jack@epa.gov, garypie.catherine@epa.gov, and dixit.naeha@epa.gov, and to the EPA Cincinnati Finance Office by email at cinwd_acctsreceivable@epa.gov, or by mail to:

EPA Cincinnati Finance Office
26 W. Martin Luther King Drive
Cincinnati, Ohio 45268

Such notice shall reference Site/Spill ID Number C5XR and EPA docket number for this action.

68. In the event that the payments for Response Costs are not made within 30 days after Respondent's receipt of a written demand requiring payment, Respondent shall pay Interest on the unpaid balance. The Interest on Response Costs shall begin to accrue on the date of the written demand and shall continue to accrue until the date of payment. Payments of Interest made under this Paragraph shall be in addition to such other remedies or sanctions available to the United States by virtue of Respondent's failure to make timely payments under this Section. Respondent shall make all payments required by this Paragraph in the manner described in Paragraphs 66 and 67.

XIX. ENFORCEMENT/WORK TAKEOVER

69. Any willful violation, or failure or refusal to comply with any provision of this Order may subject Respondent to civil penalties up to the maximum amount authorized by law. CERCLA § 106(b)(1), 42 U.S.C. § 9606(b)(1). As of the date of issuance of this Order, the statutory maximum amount is \$67,544 per violation per day. This maximum amount may increase in the future, as EPA amends its civil penalty amounts through rulemaking pursuant to the 1990 Federal Civil Penalties Inflation Adjustment Act (Public Law 101-410, codified at 28 U.S.C. § 2461), as amended by the 2015 Federal Civil Penalties Inflation Adjustment Act Improvement Act (Section 701 of Public Law 114-74). The maximum amount to be applied to this violation will be set as the most recent maximum amount set forth in 40 C.F.R. section 19.4 as of the date that the U.S. District Court assesses any such penalty. In the event of such willful violation, or failure or refusal to comply, EPA may unilaterally carry out the actions required by this Order, pursuant to Section 104 of CERCLA, 42 U.S.C. § 9604, and/or may seek judicial enforcement of this Order pursuant to Section 106 of CERCLA, 42 U.S.C. § 9606. In addition, nothing in this

Order shall limit EPA's authority under Section XXIII (Financial Assurance). Respondent may also be subject to punitive damages in an amount up to three times the amount of any cost incurred by the United States as a result of such failure to comply, as provided in Section 107(c)(3) of CERCLA, 42 U.S.C. § 9607(c)(3).

XX. RESERVATIONS OF RIGHTS BY EPA

70. Nothing in this Order shall limit the power and authority of EPA or the United States to take, direct, or order all actions necessary to protect public health, welfare, or the environment or to prevent, abate, or minimize an actual or threatened release of hazardous substances, pollutants, or contaminants, or hazardous or solid waste on, at, or from the Site. Further, nothing in this Order shall prevent EPA from seeking legal or equitable relief to enforce the terms of this Order, from taking other legal or equitable action as it deems appropriate and necessary, or from requiring Respondent in the future to perform additional activities pursuant to CERCLA or any other applicable law. EPA reserves the right to bring an action against Respondent under Section 107 of CERCLA, 42 U.S.C. § 9607, for recovery of any response costs incurred by the United States related to this Order or the Site and not paid by Respondent.

XXI. OTHER CLAIMS

71. By issuance of this Order, the United States and EPA assume no liability for injuries or damages to persons or property resulting from any acts or omissions of Respondent. The United States or EPA shall not be deemed a party to any contract entered into by Respondent or its directors, officers, employees, agents, successors, representatives, assigns, contractors, or consultants in carrying out actions pursuant to this Order.

72. Nothing in this Order constitutes a satisfaction of or release from any claim or cause of action against Respondent or any person not a party to this Order, for any liability such person may have under CERCLA, other statutes, or common law, including but not limited to any claims of the United States under Sections 106 and 107 of CERCLA, 42 U.S.C. §§ 9606 and 9607.

73. Nothing in this Order shall be deemed to constitute preauthorization of a claim within the meaning of Section 111(a)(2) of CERCLA, 42 U.S.C. § 9611(a)(2), or 40 C.F.R. § 300.700(d).

74. No action or decision by EPA pursuant to this Order shall give rise to any right to judicial review, except as set forth in Section 113(h) of CERCLA, 42 U.S.C. § 9613(h).

XXII. INSURANCE

75. No later than 5 days before commencing any on-site Work, Respondent shall secure, and shall maintain for the duration of this Order, commercial general liability with limits of liability of \$1 million per occurrence, automobile liability insurance with limits of liability of \$1 million per accident, and umbrella liability insurance with limits of liability of \$5 million in excess of the required commercial general liability and automobile liability limits, naming EPA as an additional insured with respect to all liability arising out of the activities performed by or on behalf of Respondent pursuant to this Order. Within the same time period, Respondent shall

provide EPA with certificates of such insurance and a copy of each insurance policy. Respondent shall submit such certificates and copies of policies each year on the anniversary of the Effective Date. In addition, for the duration of the Order, Respondent shall satisfy, or shall ensure that its contractors or subcontractors satisfy, all applicable laws and regulations regarding the provision of worker's compensation insurance for all persons performing Work on behalf of Respondent in furtherance of this Order. If Respondent demonstrates by evidence satisfactory to EPA that any contractor or subcontractor maintains insurance equivalent to that described above, or insurance covering some or all of the same risks but in a lesser amount, then, with respect to that contractor or subcontractor, Respondent need provide only that portion of the insurance described above which is not maintained by such contractor or subcontractor. Respondent shall ensure that all submittals to EPA under this Paragraph identify the East Palestine Train Derailment Site, East Palestine, Ohio and the EPA docket number for this action.

XXIII. FINANCIAL ASSURANCE

76. In order to ensure completion of the Work, Respondent shall secure financial assurance, within 30 days of receiving an initial estimated cost of work ("Estimated Cost of the Work") from EPA, in an amount equal to the Estimated Cost of the Work. The financial assurance must be one or more of the mechanisms listed below, in a form substantially identical to the relevant sample documents available from EPA or under the "Financial Assurance - Orders" category on the Cleanup Enforcement Model Language and Sample Documents Database at <https://cfpub.epa.gov/compliance/models/>, and satisfactory to EPA. Respondent may use multiple mechanisms if they are limited to trust funds, surety bonds guaranteeing payment, and/or letters of credit.

a. A trust fund: (1) established to ensure that funds will be available as and when needed for performance of the Work; (2) administered by a trustee that has the authority to act as a trustee and whose trust operations are regulated and examined by a federal or state agency; and (3) governed by an agreement that requires the trustee to make payments from the fund only when the EPA Region 5 Superfund & Emergency Response Division Director advises the trustee in writing that: (i) payments are necessary to fulfill the Respondent's obligations under the Order; or (ii) funds held in trust are in excess of the funds that are necessary to complete the performance of Work in accordance with this Order;

b. A surety bond, issued by a surety company among those listed as acceptable sureties on federal bonds as set forth in Circular 570 of the U.S. Department of the Treasury, guaranteeing payment or performance in accordance with Paragraph 82 (Access to Financial Assurance);

c. An irrevocable letter of credit, issued by an entity that has the authority to issue letters of credit and whose letter-of-credit operations are regulated and examined by a federal or state agency, guaranteeing payment in accordance with Paragraph 82 (Access to Financial Assurance);

d. A demonstration by a Respondent that it meets the relevant financial test criteria of Paragraph 79; or

e. A guarantee to fund or perform the Work executed by a company (1) that is a direct or indirect parent company of a Respondent or has a “substantial business relationship” (as defined in 40 C.F.R. § 264.141(h)) with a Respondent; and (2) can demonstrate to EPA’s satisfaction that it meets the financial test criteria of Paragraph 79.

77. **Standby Trust.** If Respondent seeks to establish financial assurance by using a surety bond, a letter of credit, or a corporate guarantee, Respondent shall at the same time establish and thereafter maintain a standby trust fund, which must meet the requirements specified in Paragraph 76.a, and into which payments from the other financial assurance mechanism can be deposited if the financial assurance provider is directed to do so by EPA pursuant to Paragraph 82 (Access to Financial Assurance). An originally signed duplicate of the standby trust agreement must be submitted, with the other financial mechanism, to EPA in accordance with Paragraph 78. Until the standby trust fund is funded pursuant to Paragraph 82 (Access to Financial Assurance), neither payments into the standby trust fund nor annual valuations are required.

78. Within 30 days after receiving the Estimated Cost of the Work from EPA, Respondent shall submit to EPA proposed financial assurance mechanisms in draft form in accordance with Paragraph 76 for EPA’s review. Within 30 days after EPA’s approval of the form and substance of Respondent’s financial assurance, Respondent shall secure all executed and/or otherwise finalized mechanisms or other documents consistent with the EPA-approved form of financial assurance and shall submit such mechanisms and documents to the EPA regional attorneys: garypie.catherine@epa.gov and dixit.naeha@epa.gov.

79. If Respondent seeks to provide financial assurance by means of a demonstration or guarantee under Paragraph 76.d or 76.e, then Respondent must within 30 days:

a. Demonstrate that:

(1) the Respondent or guarantor has:

- i. Two of the following three ratios: a ratio of total liabilities to net worth less than 2.0; a ratio of the sum of net income plus depreciation, depletion, and amortization to total liabilities greater than 0.1; and a ratio of current assets to current liabilities greater than 1.5; and
- ii. Net working capital and tangible net worth each at least six times the sum of the Estimated Cost of the Work and the amounts, if any, of other federal, state, or tribal environmental obligations financially assured through the use of a financial test or guarantee; and
- iii. Tangible net worth of at least \$10 million; and
- iv. Assets located in the United States amounting to at least 90 percent of total assets or at least six times the sum of the Estimated Cost of the Work and the amounts, if any, of other federal, state, or tribal environmental obligations

financially assured through the use of a financial test or guarantee; or

(2) The Respondent or guarantor has:

- i. A current rating for its senior unsecured debt of AAA, AA, A, or BBB as issued by Standard and Poor's or Aaa, Aa, A or Baa as issued by Moody's; and
- ii. Tangible net worth at least six times the sum of the Estimated Cost of the Work and the amounts, if any, of other federal, state, or tribal environmental obligations financially assured through the use of a financial test or guarantee; and
- iii. Tangible net worth of at least \$10 million; and
- iv. Assets located in the United States amounting to at least 90 percent of total assets or at least six times the sum of the Estimated Cost of the Work and the amounts, if any, of other federal, state, or tribal environmental obligations financially assured through the use of a financial test or guarantee; and

b. Submit to EPA for the Respondent or guarantor: (1) a copy of an independent certified public accountant's report of the entity's financial statements for the latest completed fiscal year, which must not express an adverse opinion or disclaimer of opinion; and (2) a letter from its chief financial officer and a report from an independent certified public accountant substantially identical to the sample letter and reports available from EPA or under the "Financial Assurance – Orders" subject list category on the Cleanup Enforcement Model Language and Sample Documents Database at <https://cfpub.epa.gov/compliance/models/>.

80. If Respondent provides financial assurance by means of a demonstration or guarantee under Paragraph 76.d or 76.e, Respondent must also:

a. Annually resubmit the documents described in Paragraph 79.b within 90 days after the close of the Respondent's or guarantor's fiscal year;

b. Notify EPA within 30 days after the Respondent or guarantor determines that it no longer satisfies the relevant financial test criteria and requirements set forth in this Section; and

c. Provide to EPA, within 30 days of EPA's request, reports of the financial condition of the Respondent or guarantor in addition to those specified in Paragraph 79.b; EPA may make such a request at any time based on a belief that the Respondent or guarantor may no longer meet the financial test requirements of this Section.

81. Respondent shall diligently monitor the adequacy of the financial assurance. If Respondent becomes aware of any information indicating that the financial assurance provided

under this Section is inadequate or otherwise no longer satisfies the requirements of this Section, Respondent shall notify EPA of such information within 30 days. If EPA determines that the financial assurance provided under this Section is inadequate or otherwise no longer satisfies the requirements of this Section, EPA will notify the Respondent of such determination. Respondent shall, within 30 days after notifying EPA or receiving notice from EPA under this Paragraph, secure and submit to EPA for approval a proposal for a revised or alternative financial assurance mechanism that satisfies the requirements of this Section. Respondent shall follow the procedures of Paragraph 83 in seeking approval of, and submitting documentation for, the revised or alternative financial assurance mechanism. Respondent's inability to secure financial assurance in accordance with this Section does not excuse performance of any other obligation under this Order.

82. Access to Financial Assurance

a. If EPA determines that Respondent (1) has ceased implementation of any portion of the Work, (2) is seriously or repeatedly deficient or late in its performance of the Work, or (3) is implementing the Work in a manner that may cause an endangerment to human health or the environment, EPA may issue a written notice ("Performance Failure Notice") to both Respondent and the financial assurance provider regarding the Respondent's failure to perform. Any Performance Failure Notice issued by EPA will specify the grounds upon which such notice was issued and will provide Respondent a period of 10 days within which to remedy the circumstances giving rise to EPA's issuance of such notice. If, after expiration of the 10-day period specified in this Paragraph, Respondent has not remedied to EPA's satisfaction the circumstances giving rise to EPA's issuance of the relevant Performance Failure Notice, then, in accordance with any applicable financial assurance mechanism, EPA may at any time thereafter direct the financial assurance provider to immediately: (i) deposit any funds assured pursuant to this Section into the standby trust fund; or (ii) arrange for performance of the Work in accordance with this Order.

b. If EPA is notified by the provider of a financial assurance mechanism that it intends to cancel the mechanism, and the Respondent fails to provide an alternative financial assurance mechanism in accordance with this Section at least 30 days prior to the cancellation date, EPA may, prior to cancellation, direct the financial assurance provider to deposit any funds guaranteed under such mechanism into the standby trust fund for use consistent with this Section.

83. **Modification of Amount, Form, or Terms of Financial Assurance.** Respondent may submit, on any anniversary of the Effective Date or following Respondent's request for, and EPA's approval of, another date, a request to reduce the amount, or change the form or terms, of the financial assurance mechanism. Any such request must be submitted to the EPA individual(s) referenced in Paragraph 78, and must include an estimate of the cost of the remaining Work, an explanation of the bases for the cost calculation, a description of the proposed changes, if any, to the form or terms of the financial assurance, and any newly proposed financial assurance documentation in accordance with the requirements of Paragraphs 76 and 77 (Standby Trust). EPA will notify Respondent of its decision to approve or disapprove a requested reduction or change. Respondent may reduce the amount or change the form or terms of the financial assurance mechanism only in accordance with EPA's approval. Within 30 days after receipt of

EPA's approval of the requested modifications pursuant to this Paragraph, Respondent shall submit to the EPA individual(s) referenced in Paragraph 78 all executed and/or otherwise finalized documentation relating to the amended, reduced, or alternative financial assurance mechanism. Upon EPA's approval, the Estimated Cost of the Work shall be deemed to be the estimate of the cost of the remaining Work in the approved proposal.

84. **Release, Cancellation, or Discontinuation of Financial Assurance.** Respondent may release, cancel, or discontinue any financial assurance provided under this Section only: (a) after receipt of documentation issued by EPA certifying completion of the Work; or (b) in accordance with EPA's written approval of such release, cancellation, or discontinuation.

XXIV. MODIFICATION

85. An OSC may make modifications to any plan or schedule in writing or by oral direction. Any oral modification will be memorialized in writing by EPA within 5 days, but shall have as its effective date the date of the OSC's oral direction. Any other requirements of this Order may be modified in writing by signature of the Division Directors (or their designees) of EPA Regions 3 and 5.

86. If Respondent seeks permission to deviate from any approved Work Plan or schedule, Respondent's Project Coordinator shall submit a written request to EPA for approval outlining the proposed modification and its basis. Respondent may not proceed with the requested deviation until receiving approval from the OSC pursuant to Paragraph 85.

87. No informal advice, guidance, suggestion, or comment by the OSC or other EPA representatives regarding reports, plans, specifications, schedules, or any other writing submitted by Respondent shall relieve Respondent of its obligation to obtain any formal approval required by this Order, or to comply with all requirements of this Order, unless it is formally modified.

XXV. DELAY IN PERFORMANCE

88. Respondent shall notify EPA of any delay or anticipated delay in performing any requirement of this Order. Such notification shall be made by telephone and email to the OSC within 48 hours after Respondent first knew or should have known that a delay might occur. Respondent shall adopt all reasonable measures to avoid or minimize any such delay. Within 7 days after notifying EPA by telephone and email, Respondent shall provide to EPA written notification fully describing the nature of the delay, the anticipated duration of the delay, any justification for the delay, all actions taken or to be taken to prevent or minimize the delay or the effect of the delay, a schedule for implementation of any measures to be taken to mitigate the effect of the delay, and any reason why Respondent should not be held strictly accountable for failing to comply with any relevant requirements of this Order. Increased costs or expenses associated with implementation of the activities called for in this Order is not a justification for any delay in performance.

89. Any delay in performance of this Order that, in EPA's judgment, is not properly justified by Respondent under the terms of Paragraph 88 shall be considered a violation of this Order. Any delay in performance of this Order shall not affect Respondent's obligations to fully perform all obligations under the terms and conditions of this Order.

XXVI. ADDITIONAL REMOVAL ACTIONS

90. Unless otherwise stated by EPA, within 30 days of receipt of notice from EPA that additional removal actions are necessary to protect public health, welfare, or the environment, Respondent shall submit for approval by EPA a Work Plan for the additional removal actions. The Work Plan shall conform to the applicable requirements of Section XI (Work to Be Performed) of this Order. Upon EPA's approval of the Work Plan pursuant to Section XI, Respondent shall implement the Work Plan for additional removal actions in accordance with the provisions and schedule contained therein. This Section does not alter or diminish the OSC's authority to make oral modifications to any plan or schedule pursuant to Section XXIV (Modification).

XXVII. NOTICE OF COMPLETION OF WORK

91. When EPA determines, after EPA's review of the final report, that all Work has been fully performed in accordance with this Order, with the exception of any continuing obligations required by this Order, including, but not limited to, post-removal site controls, land, water, or other resource use restrictions, reimbursement of Response Costs, and Record Retention, EPA will provide written notice to Respondent. If EPA determines that any Work has not been completed in accordance with this Order, EPA will notify Respondent, provide a list of the deficiencies, and require that Respondent modify the Work Plan, if appropriate, in order to correct such deficiencies within 30 days after receipt of the EPA notice. The modified Work Plan shall include a schedule for correcting such deficiencies. Within 10 days after receipt of written approval of the modified Work Plan, Respondent shall implement the modified and approved Work Plan and shall submit a modified Final Report in accordance with the EPA notice. Failure by Respondent to implement the approved modified Work Plan shall be a violation of this Order.

XXVIII. ADMINISTRATIVE RECORD

92. EPA will establish an administrative record which contains the documents that form the basis for the issuance of this Order. No later than 60 days of the Effective Date of this Order, and it shall be made available for review on EPA's website (www.epa.gov) and by appointment on weekdays between the hours of 9 am and 5 pm at the EPA offices located at 77 West Jackson Blvd., Chicago, Illinois. To review the administrative record, please contact Todd Quesada, U.S. EPA Region 5 Superfund and Emergency Management Division Records Officer at 312-886-4465 to make an appointment.


XXIX. SEVERABILITY

93. If a court issues an order that invalidates any provision of this Order or finds that Respondent has sufficient cause not to comply with one or more provisions of this Order, Respondent shall remain bound to comply with all provisions of this Order not invalidated or determined to be subject to a sufficient cause defense by the court's order.

It is so ORDERED.

DOUGLAS
BY: **BALLOTTI**  Digitally signed by
DOUGLAS BALLOTTI
Date: 2023.02.21
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[digitally signed and dated]
Douglas Ballotti
Superfund & Emergency Response Division, Region 5
U.S. Environmental Protection Agency

PAUL
BY: **LEONARD**  Digitally signed by PAUL
LEONARD
Date: 2023.02.21
11:11:15 -05'00'

[digitally signed and dated]
Paul Leonard
Superfund & Emergency Response Division, Region 3
U.S. Environmental Protection Agency